

New Hampshire Alcohol Data, 1990-2003



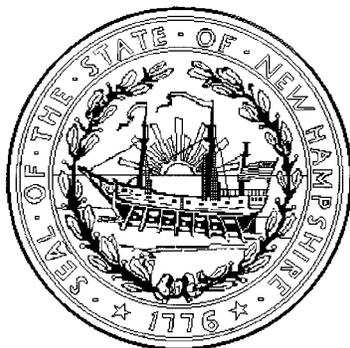
New Hampshire Department of Health and Human Services

Division of Public Health Services

Bureau of Community Health Services

Community Health Development Section

Rural Health and Primary Care Unit



New Hampshire Alcohol Data, 1990-2003

Craig R. Benson, Governor

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MESSAGE FROM THE GOVERNOR

Alcohol abuse and use among minors in New Hampshire is a significant issue today. Many adverse health effects, including cirrhosis, cancer, heart disease, and injuries, are associated with excessive alcohol use.

The New Hampshire Department of Health and Human Services, Division of Public Health Services, is working to implement programs and provide resources to prevent adolescent drinking and excessive alcohol use among adults. This report documents the magnitude of this public health problem and can be used to monitor trends, evaluate control strategies, and facilitate planning.

We ask that you please join us in this effort. By addressing alcohol abuse among adults, and alcohol use among adolescents in each community across the state, we will make great strides towards reaching our goal for a healthier New Hampshire.

Craig R. Benson
Governor

MESSAGE FROM THE COMMISSIONER

Alcohol abuse among the citizens of New Hampshire is a major concern of the Department of Health and Human Services. According to the most recent data, over 6% of adults (age 18 and older) in this state report being heavy drinkers. Almost 16% of adults have engaged in binge drinking within 30 days of our survey. More disturbing is that over 30% of high school students report binge drinking.

As a state, we must confront these data head on. Risky behavior, such as binge drinking or heavy drinking, has lifelong health consequences. Alcohol also plays a key role in many driving related injuries and fatalities as well as other accidental injuries and death. This is a significant public health issue facing New Hampshire.

Public education is a key component of the response to this issue. The Department and other agencies must inform the residents of the state about the health consequences of risky drinking, as well as the legal ramifications, such as driving while intoxicated, being a minor in possession of alcohol and supplying alcohol to minors. We look forward to working collaboratively with other state agencies, community groups and others to get this message out.

I would like to thank the Division of Public Health Services' Rural Health and Primary Care Unit for their work in producing this report. Also, I want to thank all contributors, including the Departments of Education and Safety, the New Hampshire Liquor Commission, the University of New Hampshire, the Centers for Disease Control and Prevention, the Foundation for Healthy Communities and New Futures for the information they have provided to make this report a reality.

John A. Stephen
Commissioner

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Adult Alcohol Use

In 2001, 15.8% of New Hampshire adults (age 18 and older) reported binge drinking (defined as consuming five or more drinks on one or more occasion) in the past 30 days. The following subgroups were more likely to report binge drinking compared to statewide estimates: males, individuals aged 18-34 years, unmarried people, and uninsured people.

In 2001, 6.3% of New Hampshire adults reported heavy drinking (defined as an average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women). Uninsured males and females aged 21-24 years were more likely to report heavy drinking compared to statewide estimates.

In 2001, 1.3% of New Hampshire women who were pregnant reported drinking alcohol. Pregnant women who were not married, had Medicaid payment for birth, or had less than a high school education were at greatest risk. Women who reported smoking during pregnancy more frequently reported drinking alcohol compared to women who reported not smoking during pregnancy in 2001.

Youth Alcohol Use

In 2003, 30.6% of New Hampshire students in grade 9-12 reported binge drinking; 33.5% of male students and 27.9% female students reported binge drinking. Almost half of New Hampshire students in grade 9-12 reported alcohol use in 2003; 47.1% of male students and 46.9% of female students reported alcohol use. Both alcohol use and binge drinking among students increased significantly from grade 9 to grade 12 in 2003.

In 2003, 57.8% of New Hampshire college student respondents reported binge drinking in the past 2 weeks. Conversely, 16.8% of New Hampshire college student respondents abstained from alcohol use in the past 6 months.

In 2003, 22.3% of New Hampshire retail stores selling alcohol were found to be out of compliance with the law preventing youth access to alcohol.

Alcohol-Related Disease and Death

In 2002, 37.6% of all motor vehicle crashes in New Hampshire resulting in a fatality involved an alcohol-impaired driver. In 2001, 7.1 deaths per 100,000 New Hampshire residents were due to alcohol-related liver disease.

INTRODUCTION

Alcohol abuse is the third leading preventable cause of death in the United States.¹ Many adverse health effects are associated with excessive alcohol consumption, particularly among binge drinking and heavy drinking individuals. Binge drinking is generally defined as consumption of five or more alcoholic beverages on one or more occasions in the past month. Heavy drinking is defined as an average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women. The amount of alcohol consumed directly impacts the nature and intensity of alcohol-related health effects. The higher the levels of alcohol consumed, the greater risk of negative health effects like cirrhosis, cancer, heart disease, stroke, injury, and depression.² One in four adults in the United States either report drinking patterns that put them at risk for developing problems, or currently have alcohol-related problems, including alcohol abuse or dependence.³

In New Hampshire, rates of binge drinking among men and women are higher than the national median. One in 20 New Hampshire adults reported heavy drinking in 2001. In 2000, the total state per capita (or per person) consumption of ethanol was 4.00 gallons, placing New Hampshire as the state with the highest per capita consumption per population age 14 years and older⁴ (Note: per capita rates are influenced in part by sales of alcohol to non-New Hampshire residents). Almost half of New Hampshire high school students in grades 9-12 currently use alcohol, and one in three reported binge drinking in 2003. In 2003, less than one in five New Hampshire college students surveyed reported abstaining from alcohol consumption, while over half reported binge drinking.

The U.S. Public Health Service and the National Institutes of Health recommend that people who currently drink adhere to the following maximum daily intake: no more than 2 drinks per day for men; no more than 1 drink per day for women who are not pregnant or considering pregnancy; no more than 1 drink per day for men and women over age 65; and, abstinence from alcohol for women who are pregnant or considering pregnancy.^{2,5} Additionally, the U.S. Preventive Services Task Force urge health care providers to screen and counsel adolescents and adults on alcohol use as a recommended clinical preventive practice.⁶

This report is the second annual compilation of data on alcohol consumption and the health impacts of alcohol use among New Hampshire residents. It is divided into 6 sections: adult alcohol use, alcohol use among women of childbearing age and during pregnancy, youth alcohol use, youth access to alcohol, alcohol consumption, and alcohol-related disease and death. The data can be used in several ways: 1) to document the magnitude of the public health problem; 2) to monitor trends over time; 3) to detect changes in health care practice; 4) to evaluate intervention strategies; and 5) to facilitate strategic planning. Data were current as of February 2003.

When appropriate, the alcohol-related objectives from *Healthy People 2010*⁷ and *Healthy New Hampshire 2010*⁸ are included to put New Hampshire data into perspective. *Healthy People 2010* is a set of national health targets for the next decade, while *Healthy New Hampshire 2010* objectives are specific to New Hampshire residents. The data in this report can be used in assessing progress towards *Healthy People 2010* and *Healthy New Hampshire 2010* objectives.

FREQUENTLY ASKED QUESTIONS

Why are data not presented by race or ethnicity?

Based on the 2000 United States Census, New Hampshire's population is approximately 96.0% white, 1.3% Asian, 0.7% African American, 0.2% American Indian, and 0.6% persons reporting some other race. About 1.7% of the population is of Hispanic or Latino origin. Because no single racial or ethnic group exceeds 1.7% of the total population, the number of alcohol-related events in these groups is too small to allow meaningful analysis. As the state's demographics change and as data collection techniques improve, it may be possible to present data on racial and ethnic groups in the future.

How is binge drinking defined?

Binge drinking is defined as consuming five or more alcoholic beverages during one or more occasions. Many surveys ask respondents if they have drunk five or more alcoholic beverages on one or more occasion in the past 30 days. National agencies are currently considering changing the definition of binge drinking to be more gender-specific: five or more alcoholic beverages for males and four or more alcoholic beverages for females during one or more occasions.

How is heavy drinking defined?

Heavy drinking is defined as an average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women. This limit is based on difference between genders in weight and metabolism.⁹ Heavy drinking is not the same as chronic drinking, which is defined as consumption of an average of 2 or more drinks per day, or 60 drinks per month.

What is a compliance check?

New Hampshire law prohibits the sale of alcoholic beverages to persons less than 21 years of age and compliance checks are used to enforce this law. During a compliance check, an underage buyer attempts to purchase an alcoholic beverage. In retail establishments, if the store clerk is willing to make the sale, the store is considered out of compliance with state law. The New Hampshire Liquor Commission conducts compliance checks statewide at the invitation of and in collaboration with local law enforcement officials. In recent years, approximately 30% of all alcohol-retail stores statewide were checked for compliance. The New Hampshire Liquor Commission also conducts compliance checks at establishments that serve alcohol on-site; the result of these checks is not presented in this report.

What is fetal alcohol syndrome?

Fetal alcohol syndrome (FAS) is the name given to a group of physical and mental birth defects caused by women consuming alcohol during pregnancy. Alcohol is more likely to affect a fetus during the first 2 months of pregnancy.¹⁰ Children with FAS may have abnormal facial features and can have problems with memory, learning, attention span, problem solving, speech, and hearing. FAS cannot be cured, but can be prevented if a woman does not drink alcohol while pregnant.

I am interested in looking at rates by year, but when I read the report, sometimes I find only 5-year rates. Why?

Rates need to be calculated with a minimum number of events. Calculating a rate based on less than the minimum number creates an unstable estimate that is not reliable and can vary greatly from year to year by chance alone. Therefore, generating rates based on small numbers can lead to misinterpretation. For this reason, five years of data are sometimes aggregated to create a more stable rate.

I would like to see data for my town, but cannot find this information in the report. Why doesn't this report show town-level data?

New Hampshire has a relatively small population of 1.2 million people divided among 234 cities and towns. In a given year, the number of illnesses or deaths related to alcohol is too small to generate meaningful results on a town level. Where possible, data are presented by county to provide information that is more detailed than state-level data.

Some of the information in the report is identified as "age-adjusted". What does this mean and why is it done?

To compare populations where the distribution of age groups is different, an adjustment needs to be made. For example, the rate of cirrhosis in New Hampshire may appear higher than that of the United States. However, this may be due to New Hampshire having proportionally more older people than the United States. By age-adjusting the data using the standard 2000 United States population, the rates can be compared without concern about differences in the age distribution of the two populations.

Where can I obtain additional information about alcohol problems and addiction?

The New Hampshire Division of Public Health Services, Alcohol and Drug Abuse Prevention and Recovery Services Unit provides alcohol abuse and dependence prevention and treatment services. If you or someone you know needs more information on alcohol abuse and dependence, call 1-800-804-0909.

METHODS

95% Confidence Intervals

When available, 95% Confidence Intervals (95% CI) are presented along with point estimates for survey data. Because survey data were collected from a sample of the population, each estimate has a margin of error. The confidence interval reflects the degree of uncertainty for each estimate. For example, in Table 1, in 2001, 15.8% of sampled New Hampshire residents reported binge drinking in the past 30 days, with a 95% confidence interval of 14.4% – 17.2%. This can be interpreted to mean that our best estimate is that 15.8% of New Hampshire residents were binge drinking, but that the true value could actually be as low as 14.4% or as high as 17.2%. In other words, the estimate from the survey has a margin of error of $\pm 1.4\%$.

Additionally, a 95% confidence interval (CI) is reported around many New Hampshire birth statistics in this report. While the birth data is nearly complete, and therefore not subject to sampling error, it may be affected by misrecording of information during the data collection and entry process. Additionally, when comparing rates over time or between groups it is also necessary to consider the affect of random variation on the data. The affect of these issues will tend to be more pronounced with fewer records. Because of these issues the National Center for Health Statistics recommends a set of procedures that estimates the variability of rates and percentages based on the number of births. Throughout the report these methods have been applied. The 95% confidence interval is the range of values that you could expect to occur under similar circumstances 95% of the time.

Graphs

Graphs have varying scales adjusted for the data displayed. This should be kept in mind when making comparisons between graphs.

DATA SOURCES

Surveys

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a population-based, random-digit dialed telephone survey of civilian, non-institutionalized adults, aged 18 years and older. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted annually by all states. In New Hampshire, the Bureau of Health Statistics and Data Management is responsible for the survey. The BRFSS includes questions on health risk behaviors such as safety belt use, diet, weight control, tobacco and alcohol use, physical exercise, preventive health screenings, and use of preventive and other health care services. The data are weighted to more accurately reflect the population by accounting for age, gender, geographic location, and probability of selection. A core set of questions, which include alcohol use prevalence, is asked annually. Other alcohol-related topics are asked on a rotating basis. In New Hampshire, 4,068 interviews were completed in 2001. The national estimates provided are not calculated by pooling all BRFSS data as a sample of the nation as a whole, but are simply a calculation of the middle value of all the state estimates (the median). This method gives equal weight to smaller states and bigger states and cannot be relied upon to approximate a national sample. New Hampshire and national data can be accessed on line at: <http://www.cdc.gov/brfss/>. Additional information on the New Hampshire BRFSS is available on-line at <http://www.dhhs.state.nh.us/DHHS/BHSDM/Behavioral-Risk-Data.htm> or by calling (603) 271-5926.

New Hampshire Higher Education Alcohol, Tobacco, and Other Drug Survey

The New Hampshire Higher Education Alcohol, Tobacco and Other Drug Survey was completed for the first time in 2001. The survey was conducted at nine colleges in the state (Colby-Sawyer, Daniel Webster, Hesser, Southern New Hampshire University, New Hampshire Technical Institute, Notre Dame, Plymouth State College, Rivier, and the University of New Hampshire) and is not intended to be representative of all NH college students. The questions were derived from three other surveys: the Core survey, the National College Health Assessment, and the Annual Student Health Behavior Assessment. In 2003, a total of 3,743 students completed the survey, ranging from 116 to 677 students per school. Information on the survey is available at <http://www.unh.edu/student-life/assessment/report.htm>

Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) is a component of the Youth Risk Behavior Surveillance System, an epidemiologic surveillance system that was established by the

CDC to monitor the prevalence of youth behaviors that most influence health. The national school-based YRBS data are gathered through biennial school-based surveys that are self administered in classrooms to predominantly 9th through 12th grade students. National data are weighted to make the information representative of students in grades 9-12 in public and private schools in the 50 states and the District of Columbia. Survey procedures are designed to protect the students' privacy by allowing for anonymous and voluntary participation. The students complete the self-administered questionnaire in their classrooms during a regular class period, recording their responses directly on a computer-scannable booklet or answer sheet.

New Hampshire conducted its first statewide YRBS in 1990, and repeated the survey in 1991, 1993, 1995, 1997, 1999, 2001 and 2003. During 1997-2001, New Hampshire was not able to meet the minimum overall participation rate of 60%; therefore, the data from 1997-2001 are not weighted and are not representative of New Hampshire high school students. Data from the 1995 and 2003 New Hampshire YRBS did meet the minimum participation rate of 60%, are weighted and therefore representative of New Hampshire high school students. Procedures for administration of the statewide YRBS are similar to the national YRBS. The New Hampshire YRBS is conducted by the Department of Education.

Vital Statistics Data

Vital Statistics

New Hampshire law requires that reports of all birth, death, fetal death, marriage, and divorce be filed with the office of the State Registrar in the Division of Vital Records Administration of the Department of State. The New Hampshire Department of Health and Human Services, Division of Public Health Services, Health Statistics and Data Management Section analyzes these data. Depending on the event, filings are made by hospital personnel, physicians, funeral directors, city/town clerks, attorneys, and clerks of the courts. Reports of New Hampshire resident births and deaths in other states, and Canada, are provided to the State Registrar, for statistical purposes only, under an inter-state/Canadian agreement for the exchange of vital events information. The New Hampshire Birth and Death Data 1990-2002 Report may be accessed on line at: <http://www.dhhs.state.nh.us/dhhs/bhsdm/library/default.htm>

Birth Methodology

Percentages of women reporting alcohol consumption during pregnancy are based on birth certificate data. The specific characteristics reported in New Hampshire include: sex, age, county, birth weight (whether low or very low), and gestational age of the infant. Additional reported information includes: onset of prenatal care; maternal marital status; Medicaid payment for prenatal care, and/or delivery; maternal consumption of tobacco or alcohol at any point during the pregnancy; and maternal education level. The accuracy of reporting

maternal alcohol use during pregnancy is questionable and cautious interpretation is recommended.

National alcohol use during pregnancy figures are also based on birth certificate data. During the 1990's the number of states that collected comparable data on drinking alcohol during pregnancy from the birth certificate changed. California was a non-reporting state throughout the entire period. New York City started reporting in 1994. Data for Indiana and New York State were available beginning in 1999. South Dakota began reporting in 2000. New Hampshire collected comparable data on drinking alcohol during pregnancy from birth certificates throughout this time.

Mortality Methodology

The cause of death reported is the underlying cause of death. In a death record, the underlying cause of death is the specific disease, condition, or injury that initiated the chain of events leading to death. The underlying cause of death is not always the same as the immediate cause of death.

Other Sources of Data

Fatality Analysis Reporting System (FARS)

The Fatality Analysis Reporting System (FARS) contains data on fatal traffic crashes. To be included in FARS, a crash must involve a motor vehicle traveling on a traffic way customarily open to the public and result in the death of a person (occupant or non-occupant of a vehicle) within 30 days of the crash. The New Hampshire Department of Safety, Division of Motor Vehicles maintains statewide FARS data of fatal traffic crashes in New Hampshire.

Healthy New Hampshire 2010

Healthy New Hampshire 2010 is New Hampshire's health promotion and disease prevention agenda for the first decade of the 21st century. Similar to *Healthy People 2010* (see below), it is a compilation of health objectives for the next decade. A copy of Healthy New Hampshire 2010 can be obtained on-line at: <http://www.healthynh2010.org/>.

Healthy People 2010

Healthy People 2010 is a set of national health targets for the next decade. It builds on initiatives pursued over the past two decades including the 1979 Surgeon General's Report, *Healthy People*, and *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. It is designed to achieve two overarching goals: 1) increase quality and years of healthy life; and 2) eliminate health disparities. A copy of *Healthy People 2010* can be obtained on-line at: <http://www.health.gov/healthypeople/>.

New Hampshire Liquor Commission

The New Hampshire Liquor Commission conducts compliance checks on licensed alcohol vendors, including retail stores and restaurants and bars, throughout the state on an ongoing basis. These checks are conducted at the invitation of and in collaboration with local law enforcement officials. Under the direction of Liquor Commission staff, compliance checks are performed with underage youth who attempt to purchase alcoholic beverages. If the youth are able to purchase alcoholic beverages, the person selling the alcohol (e.g. clerk, bartender, wait staff) and the licensee are cited for violation of the state's law prohibiting sale of alcohol to minors. Information on minors' success in attempting to purchase alcohol included in this report includes the results of compliance checks in retail establishments only.

The Liquor Commission collects information on arrests of youth under age 21 unlawfully in the possession of alcoholic beverages. If caught in possession of alcohol, youth are fined a minimum of \$250. Arrests for unlawful transportation of alcoholic beverages are not included in these data.

New Hampshire State Maternal and Child Health Prenatal Program

New Hampshire women enrolled in state funded prenatal care programs at community health centers are asked about their personal demographics and health behaviors, including alcohol use before and during pregnancy, during routine patient-provider encounters. Clients' information is reported by each facility to the Department of Health and Human Services, Maternal and Child Health Prenatal Program, where data are analyzed to identify demographics of the population served and trends of specific health behaviors.

Per Capita Alcohol Consumption

Surveillance Report #62 Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977-2000 provides state data on apparent per capita alcohol consumption in the United States.⁴ It is the 17th in a series of consumption reports published annually by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Findings are based on alcoholic beverage sales data, either collected from state sources by the Alcohol Epidemiologic Data System (AEDS) or provided by beverage industry sources. Population data are obtained from the US Census Bureau and are used to calculate per capita rates. Per capita consumption is calculated using estimates of alcohol beverage volume sold derived from official state reports, expressed as quantity of ethanol in gallons per person aged 14 years and over. Age 14 is not the legal age for drinking, but there is evidence that many 14-year olds drink alcoholic beverages. New Hampshire per capita rates are influenced in part by sales of alcohol to non-New Hampshire residents.

ADULT ALCOHOL USE

Figure 1: Binge drinking among adults by gender - New Hampshire, 1990-2001

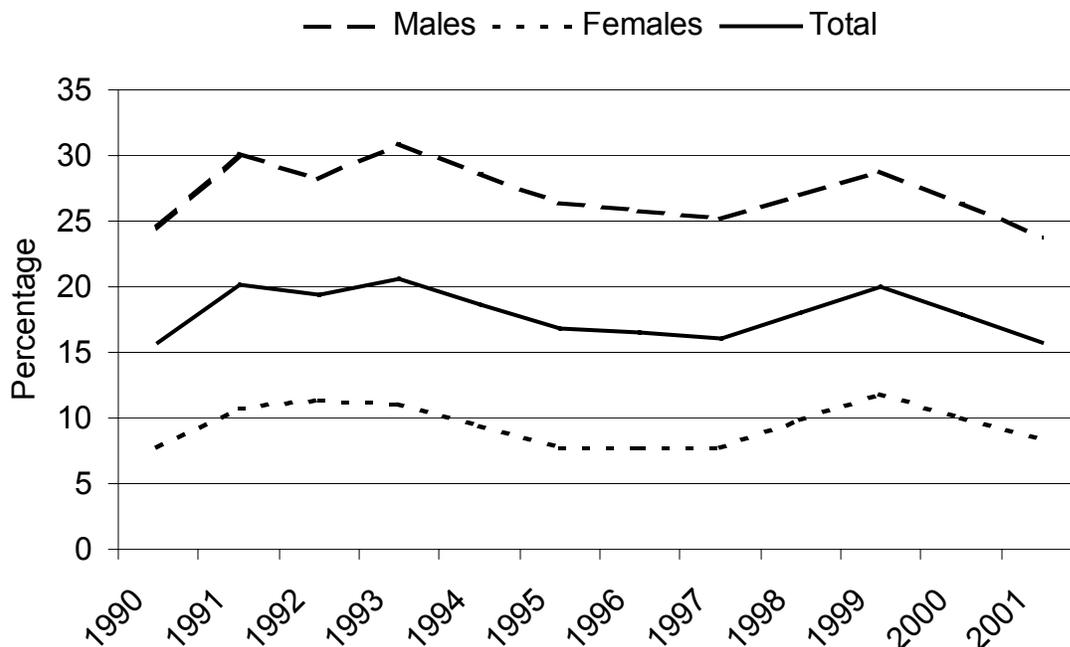


Table 1: Binge drinking among adults by gender - New Hampshire, 1990-2001

Year*	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
1990	24.6	(21.1, 28.1)	7.7	(5.7, 9.7)	15.8	(13.8, 17.8)
1991	30.1	(26.2, 34.0)	10.8	(8.3, 13.4)	20.1	(17.8, 22.4)
1992	28.2	(24.3, 32.1)	11.4	(8.5, 14.3)	19.4	(16.9, 21.9)
1993	30.9	(27.0, 34.8)	11.0	(8.4, 13.6)	20.6	(18.3, 22.9)
1995	26.4	(22.5, 30.3)	7.8	(5.8, 9.8)	16.8	(14.4, 19.1)
1997	25.1	(21.4, 28.8)	7.8	(5.8, 9.8)	16.1	(13.9, 18.3)
1999	28.8	(23.9, 33.7)	11.8	(8.6, 14.9)	20.0	(17.0, 22.9)
2001	23.8	(21.4, 26.2)	8.3	(6.9, 9.7)	15.8	(14.4, 17.2)

* BRFSS alcohol data were not collected in 1994, 1996, 1998, 2000 and 2002.

Comment: In 2001, 15.8% of New Hampshire adults reported binge drinking, or drinking five or more drinks on one occasion in the past month, compared to 14.7% of adults nationwide. Binge drinking is associated with many adverse health effects including unintentional injuries, high blood pressure, heart attacks, sexually transmitted disease, violence, and fetal alcohol syndrome.¹¹ To meet the Healthy People 2010 objective, New Hampshire adults must reduce binge drinking to 6%.

Methods: The numerator included respondents who were 18 years or older and had reported drinking five or more drinks on one or more occasion in the past month. The denominator included all respondents except those with missing, don't know, or refused answers. Data are presented as an average proportion of binge drinkers reported per month throughout the year. Binge drinking is defined as having five or more drinks on an occasion, one or more times in the past month.

Healthy People 2010 Objective 16-11c: Reduction in adults engaging in binge drinking during past month to 6.0%.

Data Sources: Behavioral Risk Factor Surveillance System (BRFSS), 1990 – 2001¹²

Table 2: Demographics of current binge drinkers – New Hampshire, 2001

	%	95% C I
All	15.8	(14.4, 17.1)
Gender		
Male	23.8	(21.5, 26.1)
Female	8.3	(7.0, 9.7)
Age		
18-20	27.6	(18.2, 36.9)
21-24	35.6	(27.6, 43.6)
25-34	21.8	(18.5, 25.2)
35-44	19.3	(16.6, 22.0)
45-54	10.7	(8.3, 13.1)
55-64	8.9	(6.2, 11.6)
65+	2.4	(1.2, 3.6)
Education		
Less than high school graduate	14.2	(9.7, 18.8)
High school diploma or GED	17.4	(14.9, 19.9)
Some college or technical school	17.3	(14.5, 20.0)
College graduate	13.5	(11.4, 15.6)
Income		
<\$15,000	12.0	(6.4, 17.6)
\$15,000-\$24,999	13.9	(10.4, 17.5)
\$25,000-\$34,999	16.8	(12.8, 20.8)
\$35,000-\$49,999	14.5	(11.4, 17.5)
\$50,000-\$74,999	17.1	(14.2, 20.1)
\$75,000+	18.2	(15.0, 21.4)
Marital Status		
Married	11.9	(10.5, 13.3)
Not married	22.0	(19.4, 24.6)
Insurance Status		
Health insurance	14.3	(12.9, 15.7)
No health insurance	27.4	(22.2, 32.7)

Comment: The following sub-groups had a higher prevalence of binge drinking than the statewide estimate: Males; 18-34 year-olds; unmarried persons; and persons with no health insurance. Sub-groups that had a lower prevalence of binge drinking than the statewide average included: Females; persons aged 45+ years and older; and married persons.

Methods: The numerator included respondents who were 18 years or older and had reported drinking five or more drinks on one or more occasion in the past month. The denominator included all respondents except those with missing, don't know, or refused answers. Income refers to total annual household income. Not married includes never married, divorced, separated, widowed, and members of an unmarried couple.

Healthy People 2010 Objective 16-11c: Reduction in adults engaging in binge drinking during past month to 6.0%.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 2001¹²

Figure 2: Heavy drinking among adults by gender - New Hampshire, 1991-2001

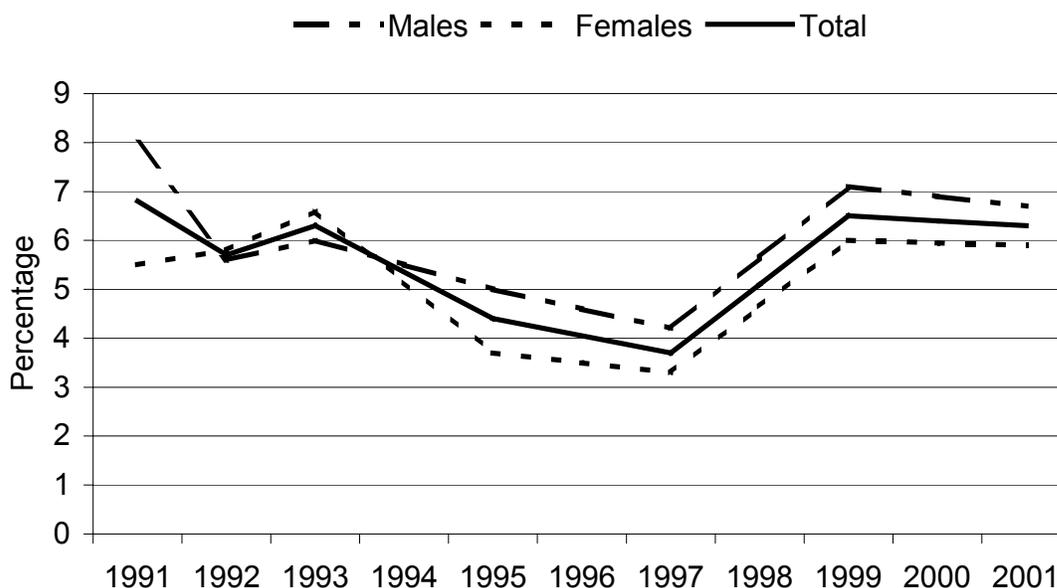


Table 3: Heavy drinking among adults by gender - New Hampshire, 1990-2001

Year*	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
1991	8.0	(5.6, 10.3)	5.5	(3.9-7.2)	6.8	(5.3, 8.2)
1992	5.6	(3.8, 7.4)	5.8	(3.8, 7.8)	5.7	(4.3, 7.0)
1993	6.0	(4.1, 7.9)	6.6	(4.7, 8.6)	6.3	(5.0, 7.6)
1995	5.0	(3.2, 6.8)	3.7	(2.2, 5.3)	4.4	(3.2, 5.5)
1997	4.2	(2.5, 5.9)	3.3	(1.9, 4.7)	3.7	(2.6, 4.8)
1999	7.1	(4.2, 9.9)	6.0	(3.5, 8.4)	6.5	(4.6, 8.4)
2001	6.9	(5.5, 8.3)	5.8	(4.7, 6.9)	6.3	(5.5, 7.2)

* BRFSS alcohol data were not collected in 1994, 1996, 1998, 2000 and 2002.

Comment: In 2001, 6.3% of New Hampshire adults reported heavy drinking. There was no significant difference observed in heavy drinking between men and women during 1991-2001. An average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women exceeds national dietary guidelines for low-risk drinking.⁹

Methods: The numerator included respondents who were adults 18 years and older who reported an average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women. The denominator included all respondents except those with missing, don't know, and refused answers. Heavy drinking is defined as an average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women.

Data Source: Behavioral Risk Factor Surveillance Survey (BRFSS), 1991–2001¹²

Table 4: Demographics of heavy drinkers by gender– New Hampshire, 2001

	<u>Males</u>		<u>Females</u>	
	<u>%</u>	<u>95% C I</u>	<u>%</u>	<u>95% C I</u>
All	6.9	(5.4, 8.0)	5.9	(4.8, 7.0)
Age				
18-20	11.6	(3.3, 19.9)	2.5	(-1.0, 6.0)
21-24	14.5	(5.5, 23.4)	15.9	(8.2, 23.6)
25-34	8.1	(4.7, 11.4)	5.6	(3.1, 8.1)
35-44	6.3	(3.9, 8.8)	5.0	(3.1, 6.9)
45-54	4.9	(2.4, 7.3)	5.5	(3.5, 7.6)
55-64	7.2	(3.6, 10.9)	4.5	(2.0, 6.9)
65+	2.6	(0.3, 4.8)	4.6	(2.3, 7.0)
Education				
Less than high school graduate	10.4	(4.4, 16.5)	1.8	(-0.4, 3.9)
High school diploma or GED	9.8	(6.8, 12.7)	3.6	(2.1, 5.1)
Some college or technical school	7.1	(4.3, 9.8)	6.2	(3.9, 8.6)
College graduate	3.6	(1.9, 5.2)	8.3	(6.2, 10.4)
Income				
<\$20,000	9.8	(3.6, 16.0)	7.0	(3.1, 10.9)
\$20,000-\$34,999	8.1	(4.5, 11.6)	5.4	(3.0, 7.9)
\$35,000-\$49,999	7.0	(3.7, 10.3)	5.2	(2.7, 7.7)
\$50,000+	5.1	(3.4, 6.7)	6.2	(4.4, 8.0)
Marital Status				
Married	4.9	(3.5, 6.3)	4.6	(3.4, 5.7)
Not married	10.4	(7.6, 13.2)	7.7	(5.6, 9.7)
Insurance Status				
Health insurance	5.8	(4.5, 7.2)	5.2	(4.1, 6.3)
No health insurance	13.8	(8.5, 19.2)	11.7	(6.3, 17.2)

Comment: The following sub-groups had a higher prevalence of heavy drinking than the statewide estimate: Uninsured males and females aged 21-24 years. The following sub-groups had a lower prevalence of heavy drinking than the statewide estimate: Males aged 65+ years and male college graduates.

Methods: The numerator included respondents who were adults 18 years and older who reported an average daily alcohol consumption of greater than 2 drinks for men and greater than 1 drink for women. The denominator included all respondents except those with missing, don't know, and refused answers. Heavy drinking is defined as an average daily alcohol consumption of greater than 2 drinks for men and greater than 1

drink for women. Income refers to total annual household income. Not married includes never married, divorced, separated, widowed, and members of an unmarried couple.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 2001¹²

ALCOHOL USE AMONG WOMEN OF CHILDBEARING AGE AND DURING PREGNANCY

Figure 3: Binge drinking among women of childbearing age (18-44 years) - New Hampshire, 1990-2001

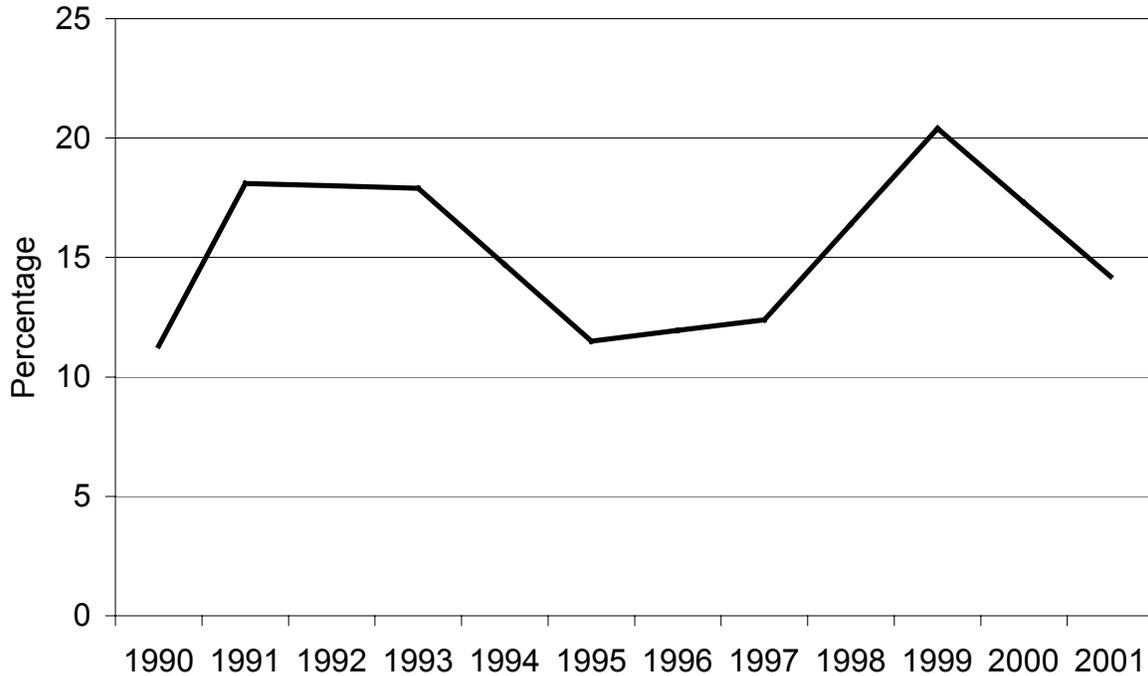


Table 5: Binge drinking among women of childbearing age (18-44 years) - New Hampshire, 1990-2001

Year*	%	95% CI
1990	11.3	(8.3, 14.2)
1991	18.1	(13.9, 22.2)
1992	18.0	(13.3, 22.6)
1993	17.9	(13.7, 22.0)
1995	11.5	(8.3, 14.8)
1997	12.4	(8.9, 15.8)
1999	20.4	(14.8, 25.9)
2001†	14.2	(11.8, 16.6)

* BRFSS alcohol data were not collected in 1994, 1996, 1998, 2000 and 2002.

† Alcohol consumption questions changed between 1999 and 2001.

Comment: In 2001, 14.2% of childbearing aged (18-44) women reported binge drinking. Binge drinking among women of childbearing age, coupled with unprotected sexual activity, has been associated with an increased risk of an alcohol-exposed pregnancy.¹³

Methods: The numerator included respondents who were women aged 18 to 44 and had reported drinking five or more drinks on one or more occasions in the past month. The denominator included all female respondents 18-44 years of age except those missing, don't know, or refused answer. Binge drinking is defined as having five or more drinks on an occasion, one or more times in the past month.

Healthy People 2010 Objective 16-11c: Reduction in adults engaging in binge drinking during past month to 6.0%.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 1990–2001¹²

Table 6: Demographics of women of childbearing age (18-44 years) who binge drink - New Hampshire, 2001

	%	95% C I
All	14.2	(11.8, 16.6)
Age		
18-20	15.7	(4.9, 26.4)
21-24	29.9	(20.5, 39.3)
25-34	12.4	(8.9, 15.8)
35-44	9.3	(6.8, 11.8)
Education		
Less than high school graduate	*	*
High school diploma or GED	15.0	(10.5, 19.6)
Some college or technical school	16.3	(11.3, 21.3)
College graduate	12.9	(9.2, 16.7)
Income		
<\$15,000	22.0	(7.1, 36.8)
\$15,000-\$24,999	14.1	(7.1, 21.0)
\$25,000-\$34,999	15.1	(8.5, 21.7)
\$35,000-\$49,999	17.4	(11.1, 23.7)
\$50,000-\$74,999	12.1	(7.4, 16.8)
\$75,000+	11.2	(6.2, 16.2)
Marital Status		
Married	8.6	(6.3, 16.2)
Not married	21.8	(17.1, 26.5)
Insurance Status		
Health insurance	12.5	(10.1, 15.0)
No health insurance	25.3	(15.9, 34.6)

* Indicates number too small for meaningful analysis.

Comment: The following groups of women of childbearing age had a higher prevalence of binge drinking than the statewide estimate: 21-24 year olds and unmarried women.

Methods: The numerator included respondents who were women aged 18-44 years and had reported drinking five or more drinks on one or more occasion in the past month. The denominator included all female respondents 18-44 years of age except those with missing, don't know, or refused answers. Income refers to total annual household income. Not married includes never married, divorced, separated, widowed, and members of an unmarried couple. The number of women of childbearing age who reported binge drinking and had less than a high school graduate education was too few to generate a reliable estimate (n<5).

Healthy People 2010 Objective 16-11c: Reduction in adults engaging in binge drinking during past month to 6.0%.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 2001¹²

Figure 4: Alcohol use among pregnant women – New Hampshire and United States, 1992-2001

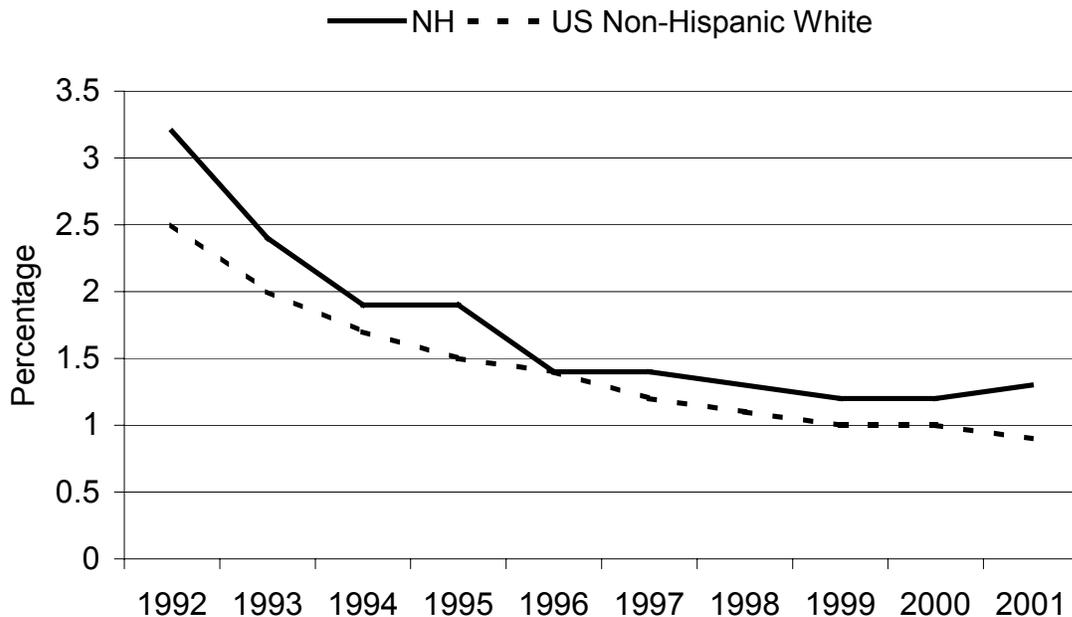


Table 7: Alcohol use among pregnant women – New Hampshire and United States, 1992-2001

	<u>N H</u>		<u>US</u>
	<u>%</u>	<u>95% CI</u>	<u>%</u>
1992	3.2	(2.9-3.4)	2.5
1993	2.4	(2.2-2.7)	2.0
1994	1.9	(1.7-2.1)	1.7
1995	1.9	(1.7-2.1)	1.5
1996	1.4	(1.2-1.6)	1.4
1997	1.4	(1.2-1.6)	1.2
1998	1.3	(1.1-1.5)	1.1
1999	1.2	(1.0-1.4)	1.0
2000	1.2	(1.1-1.4)	1.0
2001	1.3	(1.1-1.5)	0.9

Comment: During 1992-2001, trends in alcohol use during pregnancy in New Hampshire closely mirror national trends, according to birth certificate data. Birth certificate data on maternal alcohol use during pregnancy are likely to be underreported, as a mother may be less inclined to admit to a behavior that placed her child at risk, particularly in the case of a poor birth outcome.

Methods: Alcohol use was self-reported and indicated use at any time during pregnancy. The United States non-Hispanic White rate was used as a comparison due to the low percentage of racial minorities in New Hampshire. Percentages were based

on the number of births where alcohol use during pregnancy was known [14,253 (97.3%) of 14,647 births in 2001].

Healthy People 2010 Objective 16-17a: Increase the number of pregnant women who report abstinence from alcohol use in the past month to 94%.

Healthy New Hampshire 2010 Objective: Under development

Data Source: New Hampshire and National Vital Statistics Data, 1992-2001¹⁴

Table 8: Demographics of women who reported using alcohol during pregnancy – New Hampshire, 2001

	Total Women	% Used Alcohol	95% CI
All	14,253	1.3	(1.1 - 1.5)
Marital Status			
Married	10,794	1.1	(0.9 – 1.3)
Not married	3,457	1.9	(1.5 – 2.4)
Medicaid Payment for Birth			
Medicaid	2,449	2.2	(1.6 – 2.7)
Non-Medicaid	9,660	1.0	(0.8 – 1.1)
Prenatal Care Initiation			
1 st Trimester (0-12 weeks)	12,614	1.2	(1.0 – 1.3)
2 nd Trimester (13-24 weeks)	1,172	1.9	(1.1 – 2.7)
3 rd Trimester (25-40 weeks)	203	*	*
Birth Weight			
Low Birth Weight (>2500g)	933	*	*
Normal (≥2500g)	13,624	1.3	(1.1 – 1.4)
Mother's Education			
Less than high school graduate	1,371	2.3	(1.5 – 3.0)
High school diploma or GED	4,253	1.3	(1.0 – 1.7)
Some college or technical school	5,062	1.1	(0.8 – 1.4)
College graduate	3,404	1.1	(0.8 – 1.5)
Tobacco Use During Pregnancy			
Used tobacco	12,022	3.7	(2.9 – 4.4)
Did not use tobacco	2,213	0.8	(0.7 – 1.0)

* Indicates number too small for meaningful analysis.

Comment: Women with the following characteristics more frequently reported maternal alcohol use during pregnancy in 2001: Unmarried; Medicaid payment for birth; less than a high school education; and reported also using tobacco during pregnancy.

Methods: Alcohol use was self-reported and indicated use at any time during pregnancy. Percentages were based on the number of births where selected characteristics were known. A birth was counted as a Medicaid birth if Medicaid paid for either prenatal care or delivery.

Healthy People 2010 Objective 16-17a: Increase the number of pregnant women who report abstinence from alcohol use in the past month to 94%.

Data Source: New Hampshire Vital Statistics Data, 2001¹⁴

Figure 5: Women who reported using alcohol during pregnancy by age– New Hampshire, 2001

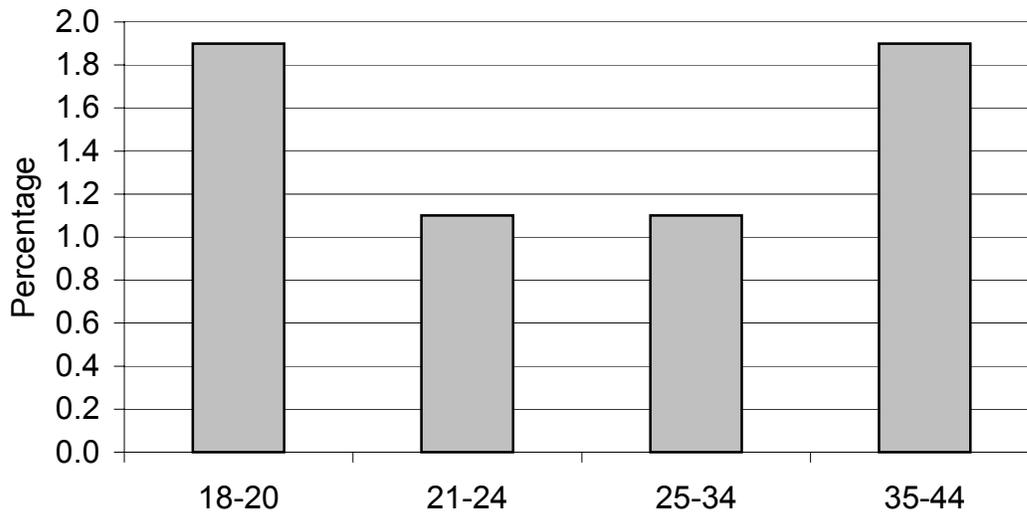


Table 9: Women who reported using alcohol during pregnancy by age– New Hampshire, 2001

	Total Women	% Used Alcohol	95% CI
Age			
<18	265	*	*
18-20	1,120	1.9	(1.1 – 2.7)
21-24	2,234	1.1	(0.7 – 1.6)
25-34	8,126	1.1	(0.8 – 1.3)
35-44	2,495	1.9	(1.4 – 2.4)
45+	13	*	*
All	14,253	1.3	(1.1 - 1.5)

* Indicates number too small for meaningful analysis.

Comment: Alcohol use during pregnancy varies according to age, though differences are not significant. The number of women aged less than 18 and women 45 and older who reported using alcohol during pregnancy were too small for meaningful analysis.

Methods: Alcohol use was self-reported and indicated use at any time during pregnancy. Percentages were based on the number of births where alcohol use during pregnancy was known. Variation in reported alcohol use may be due to differences in reporting parties.

Healthy People 2010 Objective 16-17a: Increase the number of pregnant women who report abstinence from alcohol use in the past month to 94%.

Data Source: New Hampshire Vital Statistics Data, 2001¹⁴

Figure 6: Women who reported using alcohol during pregnancy by county – New Hampshire, 1999-2002

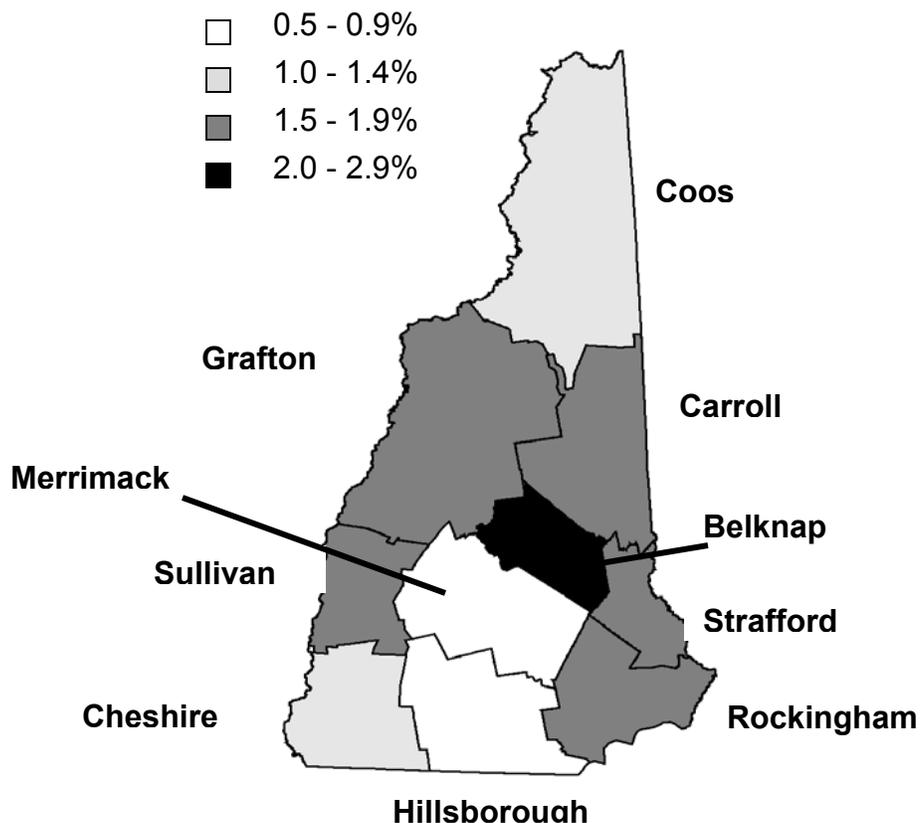


Table 10: Women who reported using alcohol during pregnancy, by county – New Hampshire, 1999-2002

	Total Women	% Used Alcohol	95% CI
All	56,357	1.2	(1.1 – 1.3)
Belknap	2,164	2.6	(2.0, 3.3)
Carroll	1,543	1.9	(1.3, 2.6)
Cheshire	2,900	1.1	(0.7, 1.4)
Coos	1,229	1.2	(0.6, 1.8)
Grafton	3,156	1.8	(1.3, 2.3)
Hillsborough	19,494	0.7	(0.6, 0.8)
Merrimack	5,987	0.8	(0.6, 1.1)
Rockingham	12,878	1.5	(1.2, 1.7)
Strafford	5,268	1.8	(1.4, 2.1)
Sullivan	1,738	1.9	(1.3, 2.5)

Comment: During 1999-2002, women living in Belknap County were more likely to report alcohol use during pregnancy than women living in all other counties in the state. Hillsborough County reported the greatest number of births, but the lowest rate of alcohol use during pregnancy.

Methods: Alcohol use was self-reported and indicated use at any time during pregnancy. Percentages were based on the number of births where alcohol use during pregnancy was known.

Healthy People 2010 Objective 16-17a: Increase the number of pregnant women who report abstinence from alcohol use in the past month to 94%.

Healthy New Hampshire 2010 Objective: Under development

Data Sources: New Hampshire Vital Statistics Data, 2001¹⁴

Figure 7: Reported alcohol use 3 months prior to pregnancy and during last trimester among women enrolled in public prenatal care programs - New Hampshire, 1999-2002

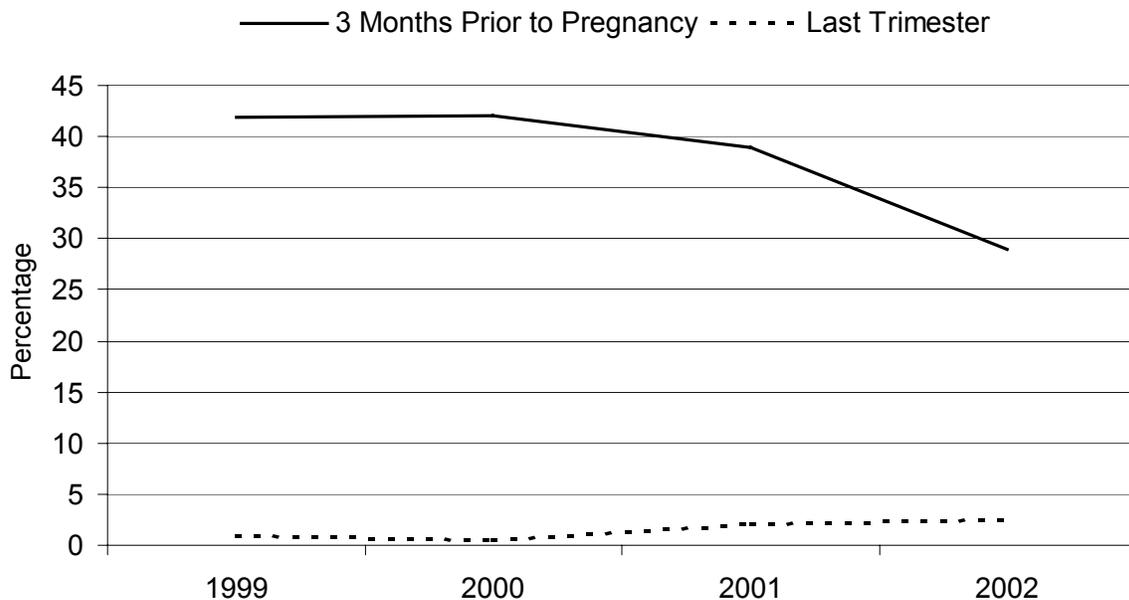


Table 11: Reported alcohol use 3 months prior to pregnancy and during last trimester among women enrolled in public prenatal care programs - New Hampshire, 1999-2002

	3 Months Prior to Pregnancy (%)	Last Trimester (%)
1999	41.9	0.7
2000	41.6	0.5
2001	39.1	2.0
2002	29.4	2.5

Comment: Alcohol use 3 months prior to pregnancy has decreased from 41.9% in 1999 to 29.4% in 2002. Alcohol use during the last trimester of pregnancy has increased slightly from 0.7% in 1999 to 2.5% in 2001. Alcohol use during the last trimester may be underreported due to the social stigma of alcohol consumption during pregnancy. Women who use alcohol during pregnancy have a greater risk of adverse pregnancy and infant outcomes.¹⁵

Methods: The numerator included respondents who were women enrolled in a public prenatal care program who consumed alcohol during the 3 months prior to pregnancy and during the last trimester. The denominator included all respondents except those with a missing, don't know, or refused answers.

Healthy People 2010 Objective 16-17a: Increase the number of pregnant women who report abstinence from alcohol use in the past month to 94%.

Data Source: New Hampshire Department of Health and Human Services, Division of Public Health Services, Maternal and Child Health Prenatal Program, 1999-2002

Figure 8: Reported average drink intake 3 months prior to pregnancy among women enrolled in public prenatal care programs - New Hampshire, 1999-2002

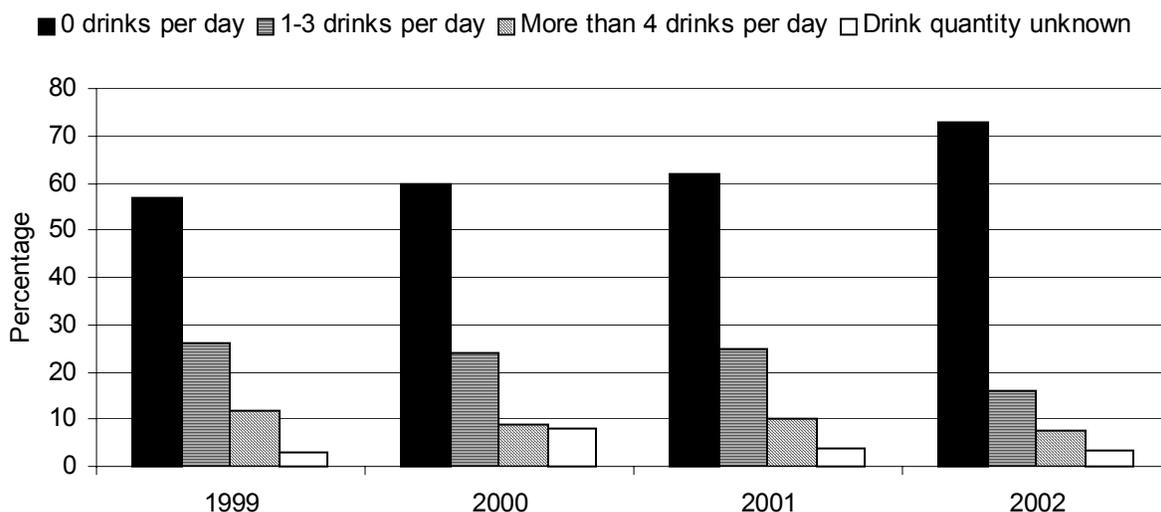


Table 12: Reported average drink intake 3 months prior to pregnancy among women enrolled in public prenatal care programs - New Hampshire, 1999-2002

	0 drinks per day (%)	1-3 drinks per day (%)	≥ 4 drinks per day (%)	Unknown (%)
1999	58.3	26.5	12.2	3.0
2000	59.5	23.5	9.1	7.8
2001	61.8	24.8	9.8	3.7
2002	72.8	16.2	7.5	3.3

Comment: In 2002, 16.2% of pregnant women reported consuming 1-3 drinks per day 3 months prior to pregnancy and 7.5% reported consuming 4 or more drinks per day 3 months prior to pregnancy. Women who use alcohol prior to pregnancy recognition, which may be interpreted as a portion of time 3 months prior to pregnancy, often continue using alcohol during pregnancy.¹³

Methods: The numerator included respondents who were women enrolled in the public prenatal care program who consumed alcohol during the 3 months prior to pregnancy. The denominator included all respondents except those with missing, don't know, or refused answers.

Healthy People 2010 Objective 16-17a: Increase the number of pregnant women who report abstinence from alcohol use in the past month to 94%.

Data Source: New Hampshire Department of Health and Human Services, Division of Public Health Services, Maternal and Child Health Prenatal Program, 1999-2002

YOUTH ALCOHOL USE

Figure 9: Current alcohol use and binge drinking among high school students – New Hampshire, 1993-2003

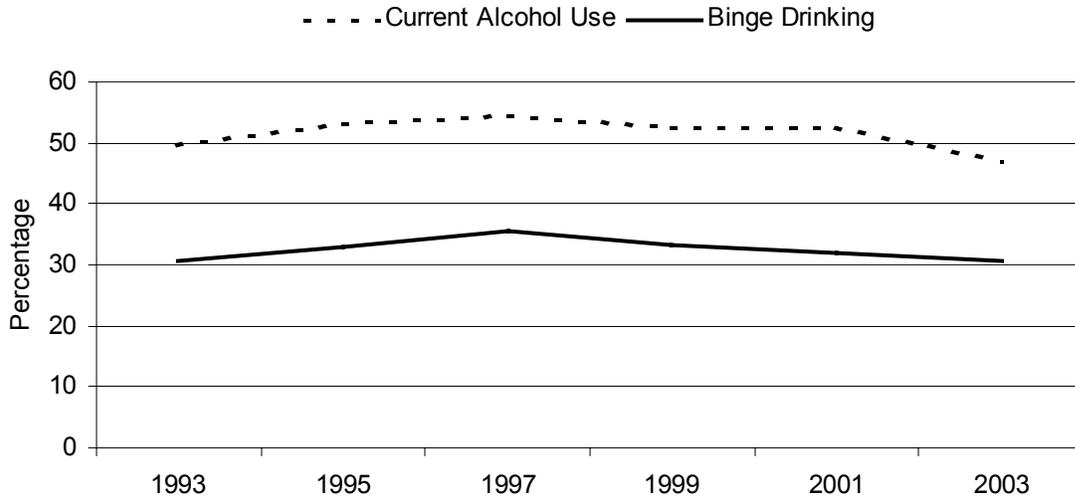


Table 13: Current alcohol use and binge drinking among high school students – New Hampshire, 1993-2003

Year*	Current Alcohol Use			Binge Drinking		
	Female (%)	Male (%)	Total (%)	Female (%)	Male (%)	Total (%)
1993	47.0	51.8	49.5	26.8	34.5	30.8
1995	51.1	55.1	53.1	28.1	37.6	32.9
1997	54.2	54.7	54.5	30.5	41.0	35.5
1999	50.5	54.8	52.5	29.5	37.3	33.2
2001	52.9	51.5	52.5	30.7	33.7	32.1
2003	46.9	47.1	47.1	27.9	33.5	30.6

* YRBS alcohol data were not collected in 1994, 1996, 1998, 2000 and 2002.

Comment: In 2003, 47.1% of NH high school students reported current alcohol use, and 30.6% reported binge drinking. These point estimates suggest current alcohol use and binge drinking among high school students in New Hampshire are on the decline.

Methods: Respondents who reported having at least one drink of alcohol on one or more of the past 30 days are considered current alcohol users and respondents who reported having five or more drinks of alcohol in a row, that is, within a couple of hours, on one or more of the past 30 days are considered binge drinkers. The denominator included all respondents except those with missing, don't know, or refused answers. Data from the 1997, 1999, and 2001 NH YRBS are unweighted due to a response rate of less than 60% and may not be representative of the adolescent population in NH. Data from the 1993, 1995 and 2003 NH YRBS are weighted and are representative of the public high school population in NH.

Healthy People 2010 Objective 26-10a and 26-11d (respectively): Increase the proportion of adolescents not using alcohol during the past 30 days to 89%. Reduce the proportion of adolescents aged 12-17 years engaging in binge drinking to 2%.

Healthy New Hampshire 2010 Objective: Increase the percentage of youth who report never using alcohol to 27%. Reduce the percentage of youth who report having used alcohol in the past 30 days to 43%.

Data Source: Youth Behavioral Risk Survey (YBRS), 1993-2003¹⁶

Figure 10: Lifetime drinking and drinking initiation before age 13 among high school students – New Hampshire, 1993-2003

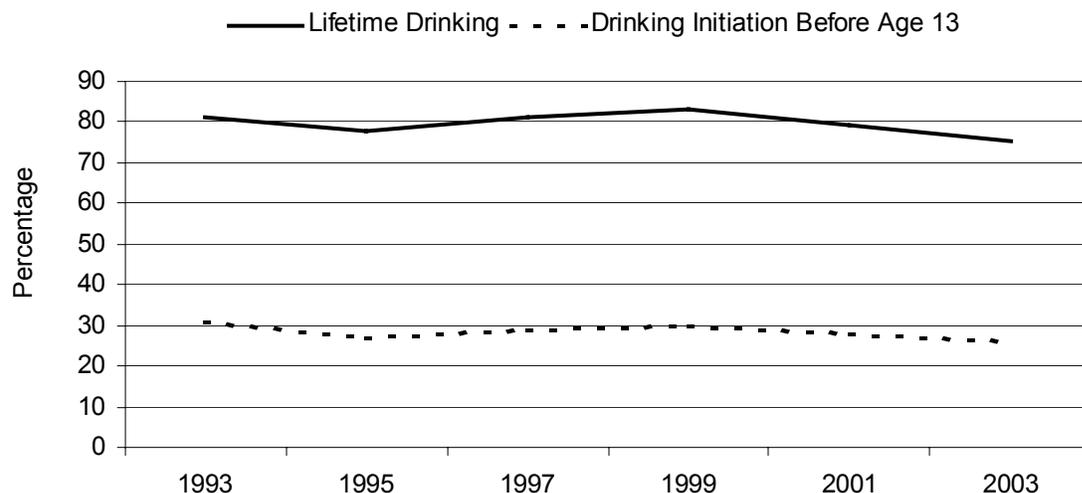


Table 14: Drinking initiation before age 13 and lifetime drinking among high school students – New Hampshire, 1993-2003

Year*	Lifetime Drinking			Drinking Initiation Before Age 13		
	Female (%)	Male (%)	Total (%)	Female (%)	Male (%)	Total (%)
1993	80.0	81.3	80.7	25.8	36.1	31.0
1995	78.5	77.1	77.8	23.8	30.0	26.9
1997	82.0	80.7	81.4	24.7	33.4	28.9
1999	83.5	82.5	82.9	25.3	35.0	30.0
2001	80.4	77.3	78.9	23.3	33.6	28.3
2003	76.3	74.5	75.4	20.8	30.7	25.8

* YRBS data are unavailable for 1994, 1996, 1998, 2000, and 2002.

Comment: In 2003, 75.4% of NH high school students reported lifetime drinking, and 25.8% reported initiating alcohol use before the age of 13. Considering these rates have varied minimally since 1993, this may indicate a need for increased alcohol risk awareness among youth. Youth who initiate alcohol use before age 13 are at an increased risk for alcohol dependence.¹⁷

Methods: Respondents who reported consuming at least one drink of alcohol on one or more days during their life are considered lifetime drinkers. Respondents who reported having their first drink of alcohol other than a few sips before the age of 13 are categorized as drinking initiation before age 13. The denominator included all respondents except those with missing, don't know, or refused answers. Data from the 1997, 1999, and 2001 NH YRBS are unweighted due to a response rate of less than 60% and may not be representative of the adolescent population in NH. Data from the 1993, 1995 and 2003 NH YRBS are weighted and are representative of the public high school population in NH.

Healthy People 2010 Objective 26-9a and 26-11d (respectively): Increase the average age of first use of alcohol in adolescents aged 12-17 years from 13.1 to 16.1. Increase the proportion of adolescents not using alcohol during the past 30 days to 89%.

Healthy New Hampshire 2010 Objective: Reduce the percentage of youth who report using alcohol to 73%. Reduce the percentage of youth who report having used alcohol in the past 30 days to 43%.

Data Source: Youth Risk Behavior Survey (YRBS), 1993-2003¹⁶

Figure 11: Alcohol use among high school students, by grade level - New Hampshire, 2003

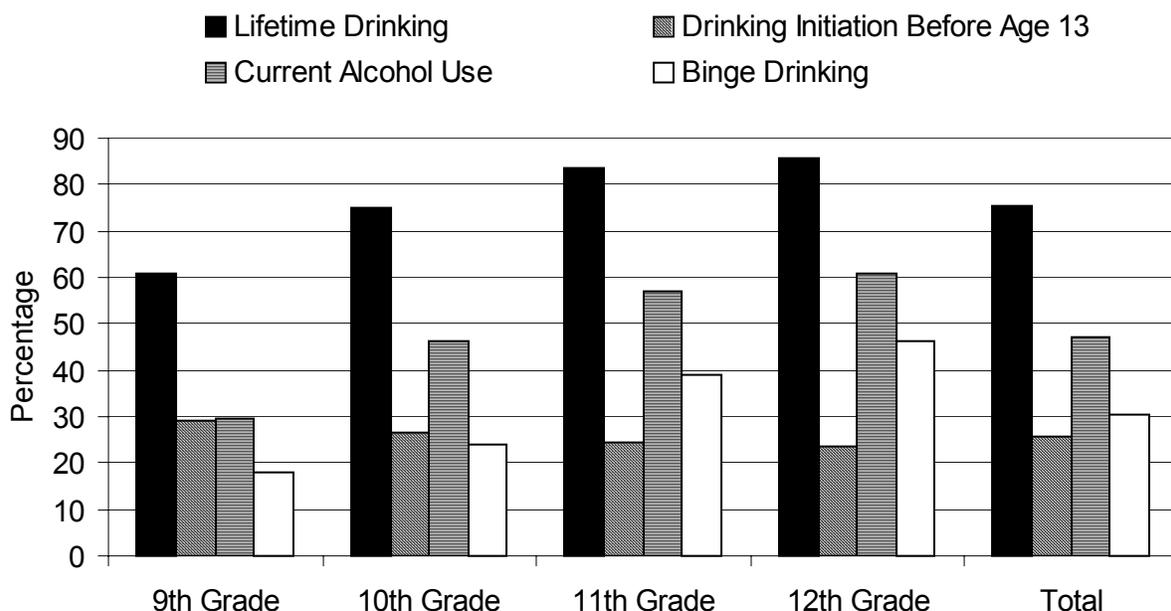


Table 15: Alcohol use among high school students, by grade level - New Hampshire, 2003

Grade	Lifetime Drinking		Drinking Initiation Before Age 13		Current Alcohol Use		Binge Drinking	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
9 th Grade	60.8	(54.9-66.7)	29.1	(22.9-35.4)	29.6	(23.8-35.5)	18.2	(13.1-23.3)
10 th Grade	75.2	(70.4-80.0)	26.5	(21.3-31.7)	46.4	(42.2-50.6)	24.2	(19.0-29.3)
11 th Grade	83.5	(76.3-90.7)	24.5	(17.4-31.6)	56.9	(48.1-65.7)	39.1	(29.4-48.8)
12 th Grade	85.6	(81.7-89.5)	23.6	(18.7-28.5)	60.9	(52.4-69.4)	46.5	(37.0-56.0)
Total	75.4	(70.7-80.0)	25.8	(22.3-29.3)	47.1	(41.8-52.4)	30.6	(25.9-35.3)

Comment: In 2003, NH high school students increasingly reported lifetime drinking, current alcohol use, and binge drinking with grade level, suggesting interventions are necessary to prevent and reduce youth alcohol consumption.

Methods: Lifetime drinkers are respondents who reported consuming at least one drink of alcohol on one or more days during their life. Respondents who reported having their first drink of alcohol other than a few sips before the age of 13 are categorized as drinking initiation before age 13. Current alcohol users reported having at least one drink of alcohol on one or more of the past 30 days and binge drinkers reported having

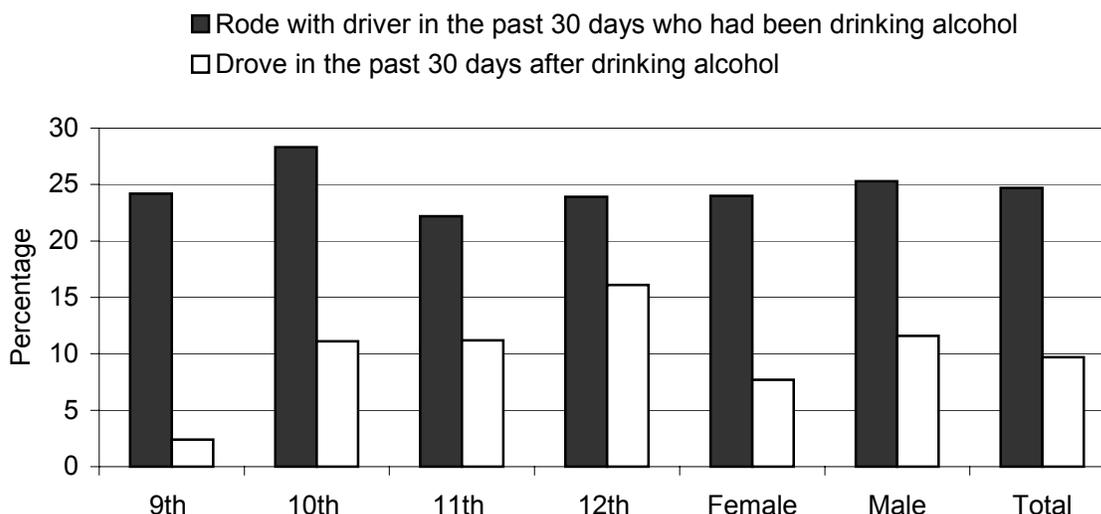
five or more drinks of alcohol in a row, that is, within a couple of hours, on one or more of the past 30 days. The denominator included all respondents except those with missing, don't know, or refused answers. Data from the 2003 NH YRBS are weighted and are representative of the public high school population in NH.

Healthy People 2010 Objective 26-9a, 26-9c, 26-10a, 26-11a, and 26-11d (respectively): Increase the average age of first use of alcohol in adolescents aged 12-17 years from 13.1 to 16.1. Increase the proportion of high school seniors never using alcohol to 19%. Increase the proportion of adolescents not using alcohol during the past 30 days to 89%. Reduce the proportion of high school seniors engaging in binge drinking to 11%. Reduce the proportion of adolescents aged 12-17 years engaging in binge drinking to 2%.

Healthy New Hampshire 2010 Objective: Reduce the percentage of youth who report using alcohol to 73%. Reduce the percentage of youth who report having used alcohol in the past 30 days to 43%.

Data Source: Youth Risk Behavior Survey (YRBS), 2003¹⁶

Figure 12: Alcohol-impaired driving in past 30 days among high school students, by grade and sex - New Hampshire, 2003



Tab

Table 16: Alcohol-impaired driving in past 30 days among high school students, by grade and sex- New Hampshire, 2003

Grade / Sex	<u>Rode with driver in the past 30 days who had been drinking alcohol</u>		<u>Drove in the past 30 days after drinking alcohol</u>	
	%	95%CI	%	95%CI
9 th Grade	24.2	(18.9-29.5)	2.4	(0.9-4.0)
10 th Grade	28.3	(23.4-33.1)	11.1	(7.5-14.7)
11 th Grade	22.2	(15.6-28.8)	11.2	(6.3-16.1)
12 th Grade	23.9	(17.9-30.0)	16.1	(10.3-22.0)
Females	24.0	(20.7-27.2)	7.7	(5.1-10.3)
Males	25.3	(20.6-30.1)	11.6	(8.2-15.0)
Total	24.7	(21.5-27.9)	9.7	(7.3-12.2)

Comment: In 2003, 24.7% of New Hampshire high school students reported riding with a driver in the past 30 days who had been drinking alcohol and 9.7% reported driving after drinking alcohol in the past 30 days.

Methods: The numerator included respondents who were high school students and reported riding in a car or another vehicle in the past 30 days with a driver who had been drinking alcohol or driving a car or other vehicle after drinking alcohol in the past 30 days. The denominator included all respondents except those with missing, don't know, or refused answers. Data from the 2003 NH YRBS are weighted and are representative of the public high school population in NH.

Healthy People 2010 Objective 26-6: Reduce the proportion of adolescents who report that they rode, in the past 30 days, with a driver who had been drinking alcohol to 30%.

Data Source: Youth Risk Behavior Survey (YRBS), 2003¹⁶

Figure 13: Alcohol use among college students - New Hampshire, 2003

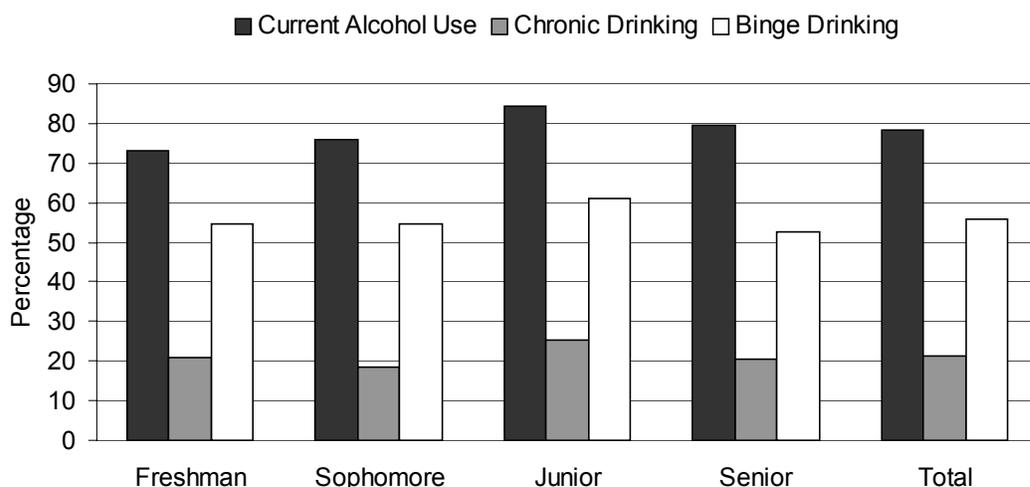


Table 17: Alcohol use among college students - New Hampshire, 2001-2003

	Freshman (%)	Sophomore (%)	Junior (%)	Senior (%)	Total (%)
Current Alcohol Use					
2001	73.2	76.0	84.3	79.4	78.2
2003	76.0	77.7	82.2	84.5	80.1
Chronic Drinking					
2001	20.8	18.3	25.2	20.4	21.2
2003	21.7	23.0	17.8	19.7	20.6
Binge Drinking					
2001	54.6	54.8	60.9	52.7	55.8
2003	55.2	59.4	57.5	59.0	57.8

Comment: In 2003, 80.1% New Hampshire college students surveyed reported current alcohol use in the past 30 days and 57.8% reported binge drinking in the past 2 weeks, indicating the majority of college students surveyed are engaging in risky drinking behaviors.¹⁸

Methods: Current alcohol use is defined as consuming at least one alcoholic beverage on one or more of the past 30 days. Chronic drinking is defined as average intake of two or more drinks per day (i.e., 60 or more alcoholic drinks a month). Binge drinking is defined as consuming five or more alcoholic beverages on one or more occasion in the past 2 weeks. The denominator included all respondents except those with missing, don't know, or refused answers. The New Hampshire Higher Education Alcohol, Tobacco and Other Drug Survey was conducted at nine colleges in the state and is not intended to be representative of all NH college students.

Healthy People 2010 Objective 16-11c: Reduction in adults engaging in binge drinking during past month to 6.0%.

Data Source: New Hampshire Higher Education Alcohol, Tobacco and Other Drug Survey, 2001-2003

Figure 14: Abstinence from alcohol among college students - New Hampshire, 2003

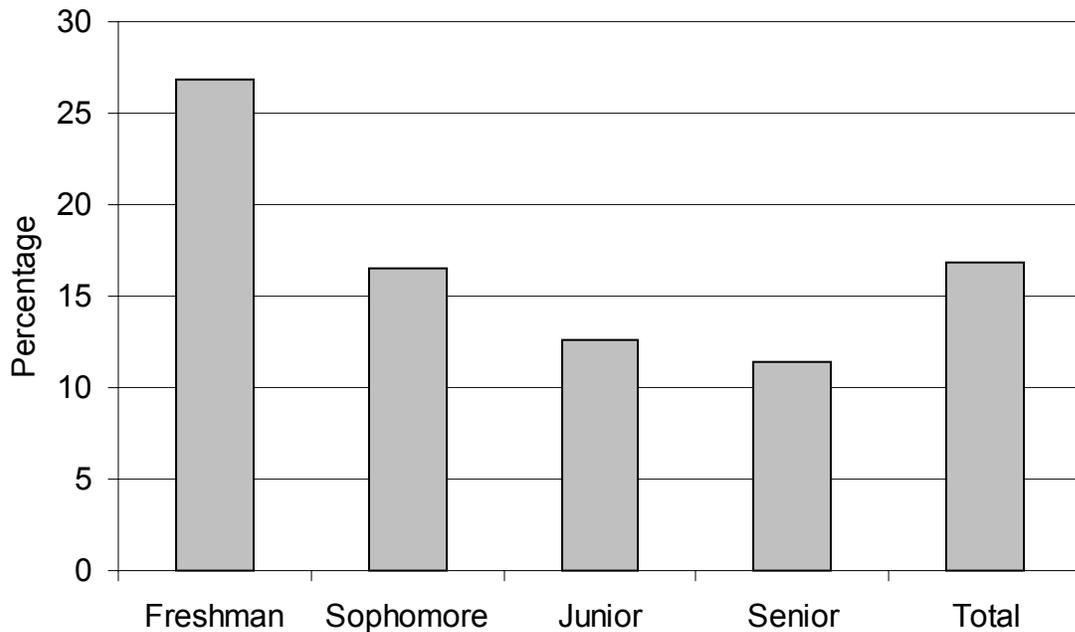


Table 18: Abstinence from alcohol among college students - New Hampshire, 2001-2003

	Freshman (%)	Sophomore (%)	Junior (%)	Senior (%)	Total (%)
Abstaining from Alcohol					
2001	26.8	25.2	18.4	25.5	19.2
2003	26.8	16.5	12.6	11.4	16.8

Comment: In 2003, 16.8% of New Hampshire college students reported abstaining from alcohol use in the past 6 months.

Methods: The numerator included respondents who reported having consumed alcoholic beverages on zero days in the past 6 months. The denominator included all respondents except those with missing, don't know, or refused answers. The New Hampshire Higher Education Alcohol, Tobacco and Other Drug Survey was conducted at nine colleges in the state and is not intended to be representative of all NH college students.

Data Source: New Hampshire Higher Education Alcohol, Tobacco and Other Drug Survey, 2001-2003

YOUTH ACCESS TO ALCOHOL

Figure 15: Successful alcoholic beverage buy attempts by minors - New Hampshire, 1997-2003

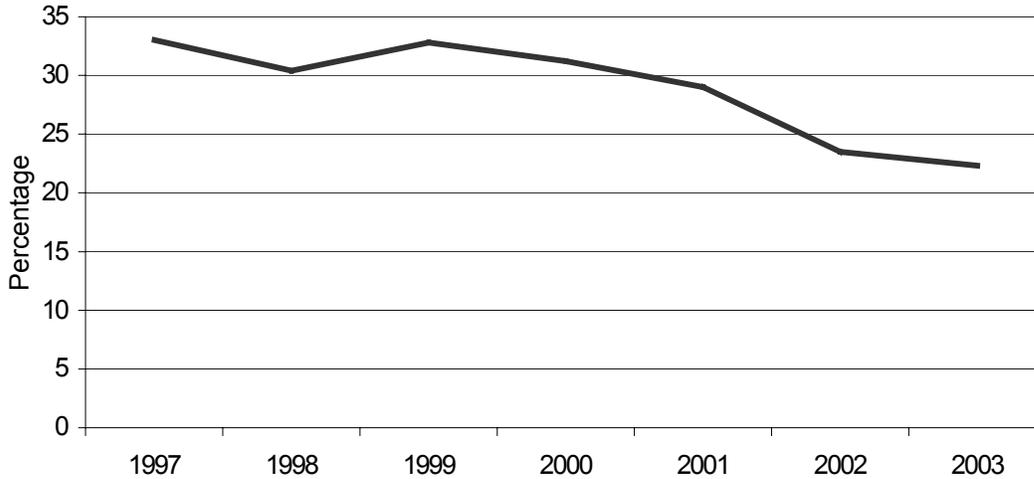


Table 19: Successful alcoholic beverage buy attempts by minors - New Hampshire, 1997-2003

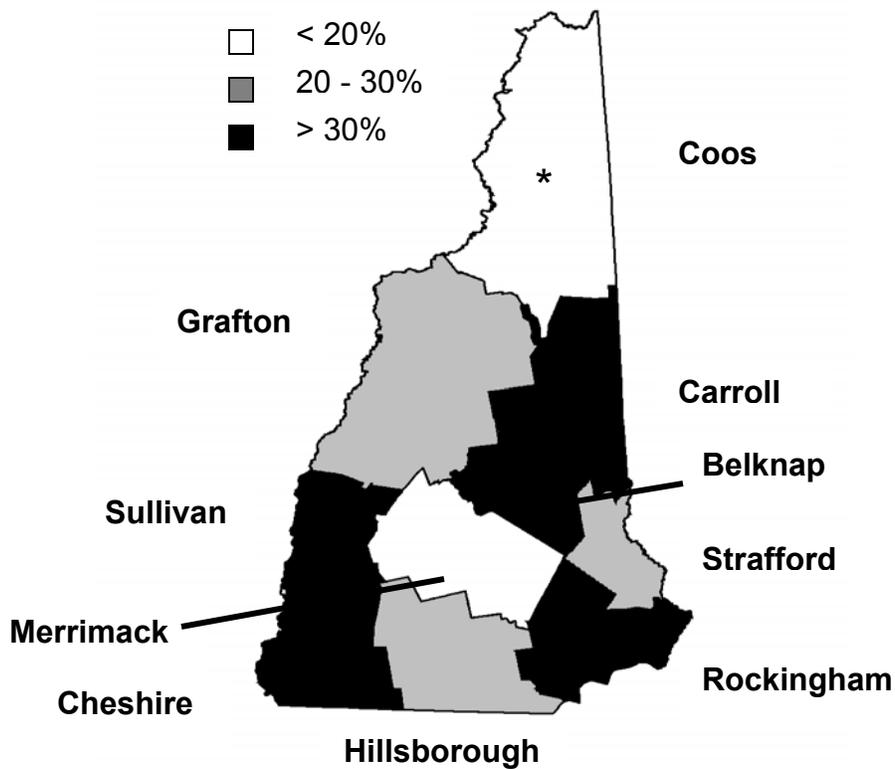
	Number of checks	Number of buys	% Of successful buys
1997	267	88	33.0
1998	313	95	30.4
1999	548	180	32.8
2000	481	150	31.2
2001	610	177	29.0
2002	533	125	23.5
2003	687	153	22.3

Comment: In 2003, 22.3% of minors' attempts to purchase alcoholic beverages from retail stores were successful, whereas 33% of minors' attempts were successful in 1997.

Methods: Compliance checks are conducted under the supervision of NH Liquor Commission staff, and involve minors attempting to purchase alcoholic beverages from retail stores. Rates include data from complete checks and are not to be considered comprehensive of all alcoholic beverage outlets in the state. A successful buy is defined as a sale of alcoholic beverages to a minor without proof that the buyer is 21 years of age or older.

Data Source: New Hampshire Liquor Commission, 1997-2003

Figure 16: Successful alcoholic beverage buy attempts by minors by county – New Hampshire, 2002-2003



* No compliance checks were conducted in Coos County during 2002-2003

Table 20: Successful alcoholic beverage buy attempts by minors by county – New Hampshire, 2002-2003

	Number of compliance checks	Number of sales	% Of successful buys
All	1,220	278	22.8
Belknap	106	33	31.1
Carroll	26	9	34.6
Cheshire	32	15	46.9
Coos	*	*	*
Grafton	28	8	28.6
Hillsborough	376	82	21.8
Merrimack	401	49	12.2
Rockingham	87	34	39.1
Strafford	114	32	28.1
Sullivan	50	16	32.0

* No compliance checks were conducted in Coos County during 2002-2003

Comment: Under the supervision of the New Hampshire Liquor Commission, minors in all of New Hampshire's counties, except Coos, were successful in purchasing alcoholic beverages from retail alcohol vendors. There were no compliance checks conducted in Coos County from 2002 to 2003.

Methods: Compliance checks, supervised by the New Hampshire Liquor Commission, involve minors attempting to purchase alcoholic beverages. A successful buy is defined as a sale of alcoholic beverages to a minor without proof that the buyer is 21 years of age or older.

Data Source: New Hampshire Liquor Commission, 2002-2003

Table 21: Arrests for unlawful possession of alcohol by county – New Hampshire 1999-2001

	1999	2000	2001	2002	2003	Average Annual Arrests
All	397	296	259	220	100	254
Belknap	57	46	34	29	12	36
Carroll	14	2	0	0	3	4
Cheshire	30	39	47	24	13	31
Coos	4	1	7	4	0	3
Grafton	57	34	32	50	21	39
Hillsborough	137	76	57	36	14	64
Merrimack	15	7	14	6	14	11
Rockingham	46	49	32	23	8	32
Strafford	34	42	35	48	14	35
Sullivan	3	0	1	0	1	1

Comment: From 1999 to 2003, the number of arrests for unlawful possession of alcohol in New Hampshire varied by county. Hillsborough County reported the highest average annual arrests for unlawful possession, and Sullivan County reported the lowest. Based on these figures, arrests for unlawful possession of alcohol appear to be declining.

Methods: The New Hampshire Liquor Commission collects information on arrests for unlawful possession of alcohol. Youth under the age of 21 in possession of alcoholic beverages are fined a minimum of \$250 as a result of these arrests.

Data Source: New Hampshire Liquor Commission, 1999-2003

ALCOHOL CONSUMPTION

Figure 17: Per capita alcohol sales – New Hampshire, 1989-2000

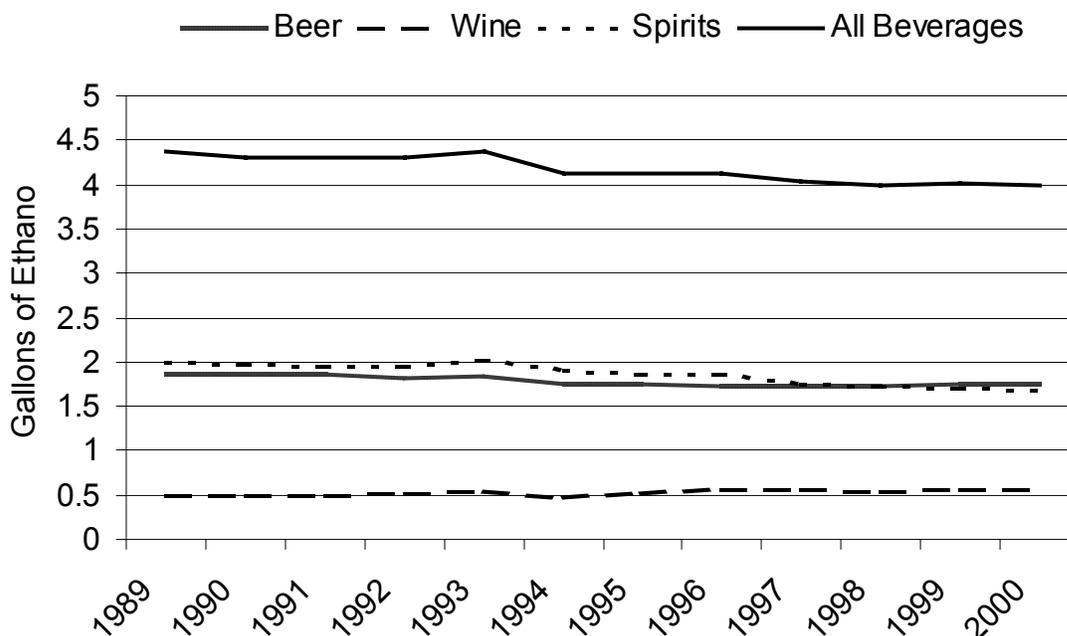


Table 22: Per capita alcohol sales – New Hampshire, 1989-2000

	Beer	Wine	Spirits	All Beverages
1989	1.87	0.50	1.99	4.37
1990	1.85	0.49	1.97	4.30
1991	1.85	0.49	1.96	4.30
1992	1.81	0.52	1.96	4.30
1993	1.83	0.54	2.01	4.38
1994	1.75	0.48	1.90	4.13
1995	1.74	0.51	1.87	4.12
1996	1.73	0.55	1.85	4.13
1997	1.73	0.55	1.76	4.04
1998	1.72	0.54	1.73	3.98
1999	1.75	0.56	1.70	4.01
2000	1.75	0.56	1.69	4.00

Comment: In 2000, New Hampshire residents consumed 4.00 gallons of ethanol per person 14 years and older, the highest consumption in the United States. Consumption of beer and spirits was more common than wine. Per capita rates are influenced in part by sales of alcohol to non-New Hampshire residents.

Method: Per capita consumption is calculated using estimates of alcohol beverage volume sold derived from official state reports, expressed as quantity of ethanol in gallons per person aged 14 years and over. Age 14 is not the legal age for drinking, but there is evidence that many 14-year olds drink alcoholic beverages.¹⁸

Healthy People 2010 Objective: Reduce average annual alcohol consumption to 2 gallons of ethanol per person aged 14 years or older.

Data Source: Surveillance Report #62 Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977-2000⁴

Figure 18: Northeast regional comparison of per capita alcohol sales, 2000

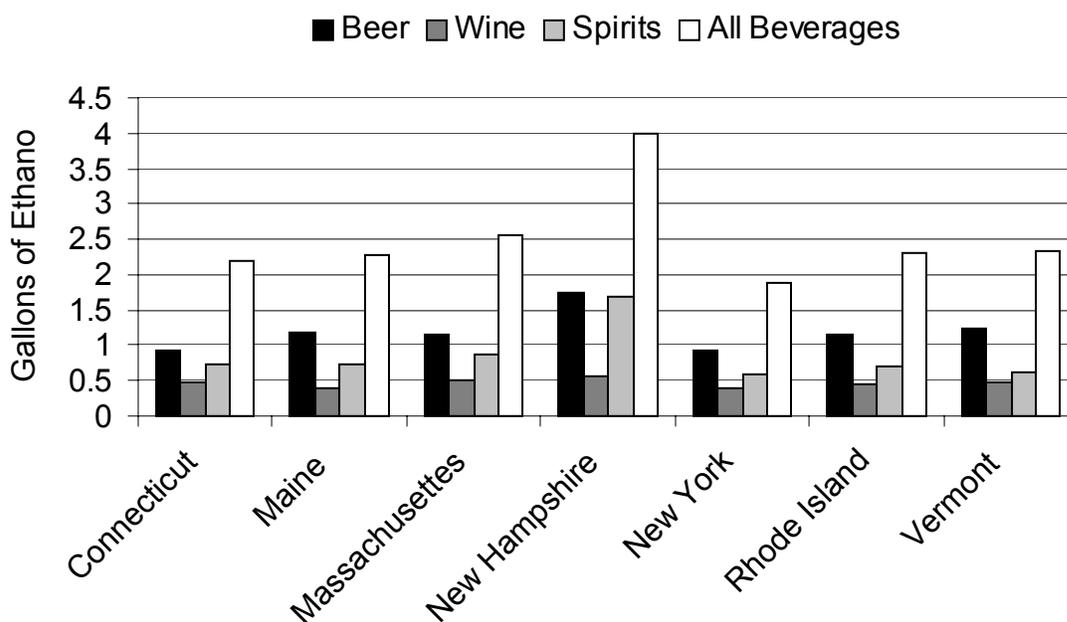


Table 23: Northeast regional comparison of per capita alcohol sales, 2000

	Beer	Wine	Spirits	All Beverages
Connecticut	0.94	0.49	0.74	2.18
Maine	1.17	0.39	0.73	2.29
Massachusetts	1.16	0.51	0.87	2.55
New Hampshire	1.75	0.56	1.69	4.00
New York	0.92	0.38	0.58	1.88
Rhode Island	1.15	0.46	0.70	2.31
Vermont	1.23	0.47	0.63	2.34

Comment: New Hampshire residents consumed 4.00 gallons of ethanol per person 14 years and older, as compared to Massachusetts residents who consumed 2.55 gallons of ethanol per person 14 years and older. Because New Hampshire has no sales tax, per capita rates are influenced in part by sales of alcohol to non-New Hampshire residents who travel to New Hampshire for reduced alcohol prices.

Method: Per capita consumption is calculated using estimates of alcohol beverages volume sold derived from official state reports, expressed as quantity in gallons of ethanol divided by the state population age 14 and over.

Healthy People 2010 Objective: Reduce average annual alcohol consumption to 2 gallons of ethanol per person aged 14 years or older.

Data Source: Surveillance Report #62 Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977-2000⁴

ALCOHOL-RELATED DISEASE AND DEATH

Figure 19: Alcohol-related liver disease mortality rate by sex – New Hampshire, 1992-2001

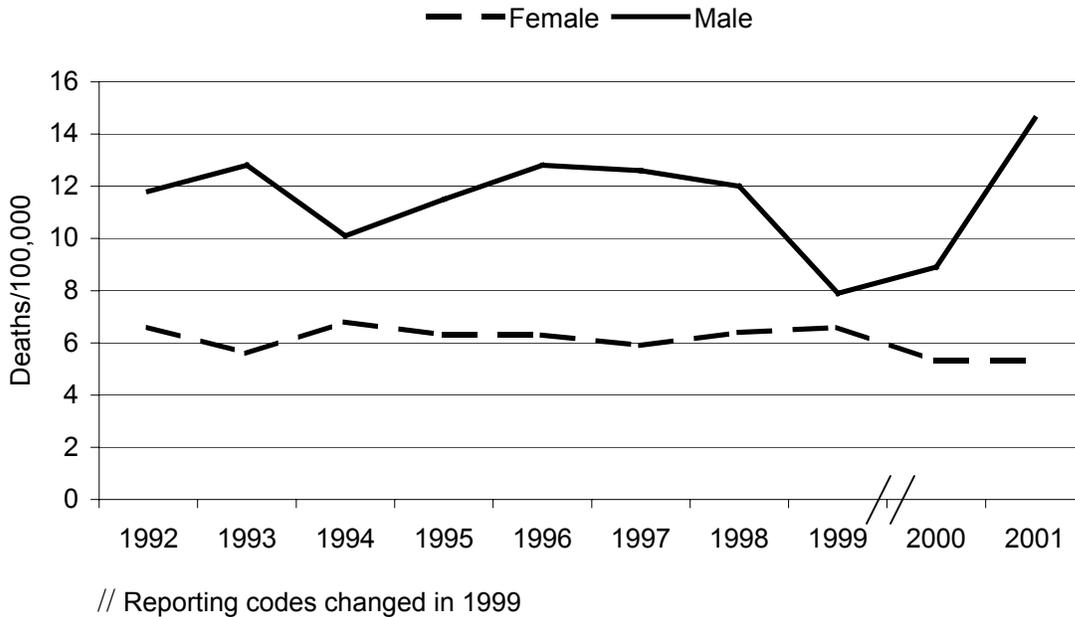


Table 24: Alcohol-related liver disease mortality rate by sex – New Hampshire, 1992-2001

<u>Year*</u>	<u>Female</u>		<u>Male</u>		<u>Total</u>	
	# of Deaths	Mortality Rate	# of Deaths	Mortality Rate	# of Deaths	Mortality Rate
1992	33	5.9	60	13.3	93	9.4
1993	38	6.6	55	11.8	93	9.2
1994	33	5.6	60	12.8	93	9.0
1995	41	6.8	48	10.1	89	8.4
1996	38	6.3	59	11.5	97	9.1
1997	39	6.3	68	12.8	107	9.8
1998	37	5.9	68	12.6	105	9.6
1999	41	6.4	64	12.0	105	9.4
2000	43	6.6	44	7.9	87	7.6
2001	36	5.3	53	8.9	89	7.1

* Reporting codes used to report alcohol-related mortality changed in 1999 from ICD-9 to ICD-10.

Comment: Alcohol-related liver disease mortality is directly related to heavy and long-term consumption of alcohol. In 2001, approximately 7 New Hampshire deaths per 100,000 residents were from alcohol-related liver disease. This only includes deaths where alcohol-related liver disease codes were indicated as the primary cause of death.

Method: Mortality rates were the average annual number of deaths per 100,000 residents and were age-adjusted to the 2000 standard United States population. Death records with an underlying cause of death coded as alcohol-related liver disease by ICD-9 code 571 or ICD-10 code K70 and K73-K74 were identified.

Healthy People 2010 Objective 26-2: Reduce cirrhosis deaths to 3.0 deaths per 100,000 population.

Data Source: New Hampshire Vital Statistics, 1992-2001¹⁴

Figure 20: Motor vehicle crashes with alcohol-impaired driver by county - New Hampshire, 2002

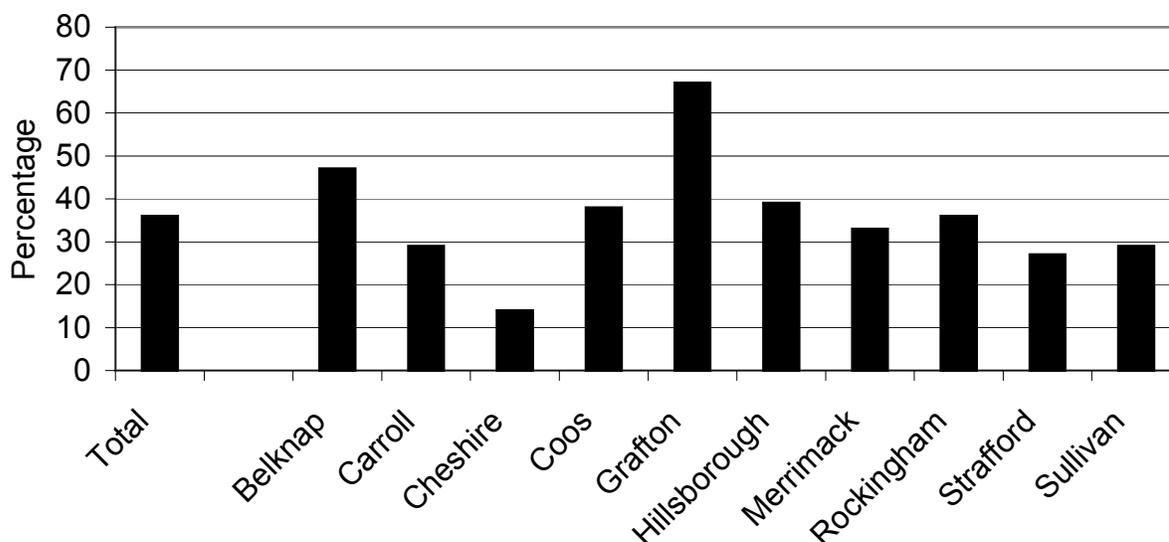


Table 25: Motor vehicle crashes with alcohol-impaired driver by county - New Hampshire, 2002

	Total Fatal Traffic Crashes	Fatal Crashes with ≥ 1 Alcohol Impaired Driver	% Fatal Crashes with ≥ 1 Alcohol Impaired Driver
Total	117	44	37.6
Belknap	5	2	40.0
Carroll	11	6	54.5
Cheshire	3	0	0
Coos	5	3	60.0
Grafton	9	3	33.3
Hillsborough	29	8	27.6
Merrimack	20	5	25.0
Rockingham	17	8	47.1
Strafford	14	5	35.7
Sullivan	4	1	25.0

Comment: In 2002, 38% of New Hampshire fatal motor vehicle crashes involved an alcohol-impaired driver. Nationwide, 41% of motor vehicle fatalities in 2002 were alcohol-related.

Methods: Fatal traffic crashes involve a motor vehicle traveling on a traffic way customarily open to the public and result in the death of a person (occupant of a vehicle or a non-occupant) within 30 days of the crash. For each fatal traffic crash, the Blood-

Alcohol Content (BAC) of all persons involved is determined and used to identify fatal crashes with an alcohol-impairment.

Healthy People 2010 26-1a: Reduce deaths caused by alcohol-related motor vehicle crashes to 4 deaths per 100,000 population.

Healthy New Hampshire Objective: Reduce the number of alcohol-related deaths on New Hampshire roads to 24 deaths per year.

Data Source: New Hampshire Department of Safety, Fatal Analysis Reporting System, 2002

Figure 21: Alcohol-related motor vehicle crash fatalities by age and gender– New Hampshire, 1995-2002

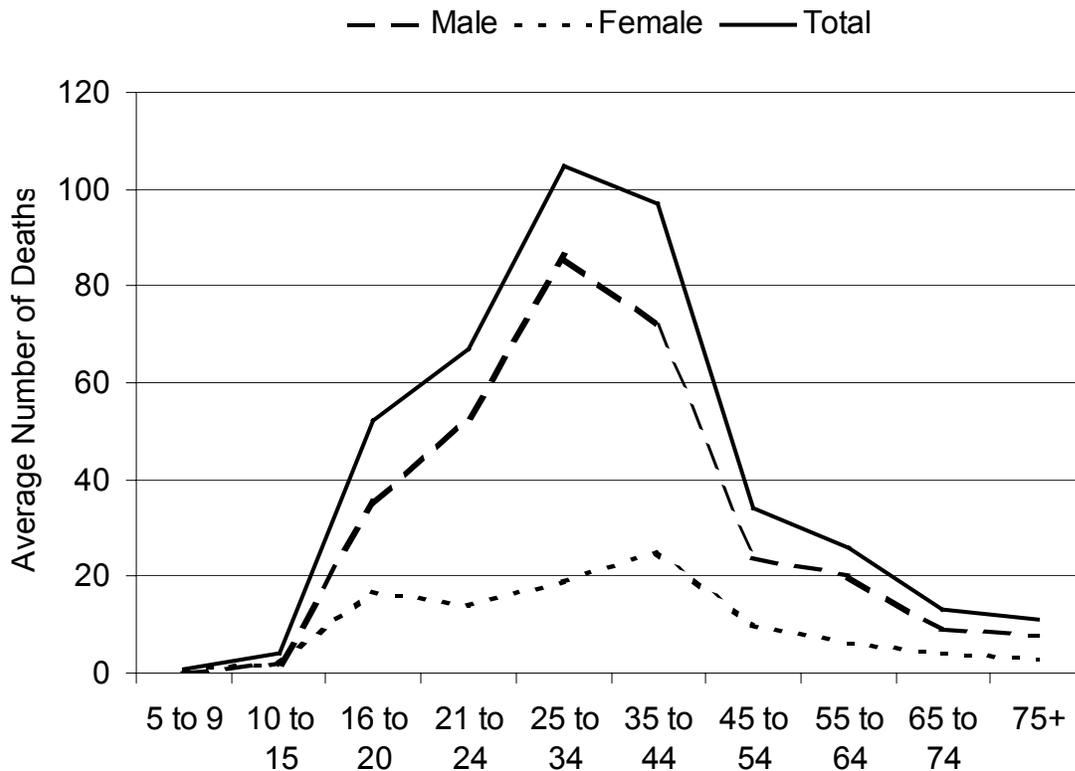


Table 26: Alcohol-related motor vehicle crash fatalities by gender and age – New Hampshire, 1995-2002

Age	1995		1996		1997		1998		1999		2000		2001		2002		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
5-9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
10-15	1	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	2	2	4
16-20	2	3	5	2	7	0	5	3	4	2	6	1	4	5	2	1	35	17	52
21-24	7	0	4	2	4	1	12	3	6	3	3	1	9	1	8	3	53	14	67
25-34	3	3	10	2	18	2	10	4	14	3	11	1	8	1	12	3	86	19	105
35-44	12	2	6	4	10	4	8	0	11	4	9	1	8	7	8	3	72	25	97
45-54	1	2	3	0	2	0	0	0	5	2	3	2	7	3	3	1	24	10	34
55-64	1	0	1	0	2	1	7	1	1	2	3	0	3	1	2	1	20	6	26
65-74	1	0	1	1	0	1	1	1	1	1	1	0	2	0	2	0	9	4	13
75+	0	1	0	0	1	0	3	0	2	0	0	1	2	0	0	1	8	3	11

Comment: From 1995 to 2002, an annual average of 39 males and 13 females died as a result of an alcohol-related motor vehicle crash, indicating males are at an increased risk for an alcohol-related motor vehicle crash fatality.

Methods: Fatal traffic crashes must involve a motor vehicle traveling on a traffic way customarily open to the public and result in the death of a person (occupant of a vehicle or a non-occupant) within 30 days of the crash.

Healthy People 2010 26-1a: Reduce deaths caused by alcohol-related motor vehicle crashes to 4 deaths per 100,000 population.

Healthy New Hampshire 2010 Objective: Reduce the number of alcohol-related deaths on New Hampshire roads to 24 deaths per year.

Data Source: New Hampshire Department of Safety, Fatal Analysis Reporting System, 1995-2002

Figure 22: Blood alcohol content (BAC) test results among vehicle operators involved in motor vehicle crash fatalities – New Hampshire, 1994-2002

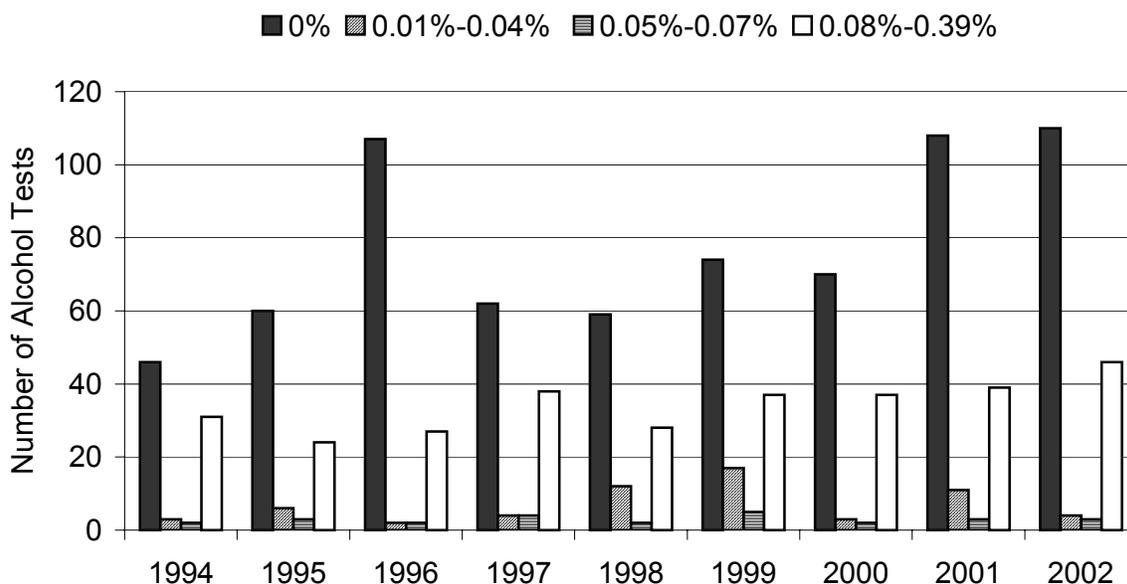


Table 27: Blood alcohol content (BAC) test results among vehicle operators involved in motor vehicle crash fatalities – New Hampshire, 1994-2002

<u>Year</u>	<u>Total alcohol tests performed</u>	<u>Blood-Alcohol Content</u>				<u>% Of alcohol-influenced drivers (0.08% or higher)</u>
		<u>0%</u>	<u>0.01%-0.04%</u>	<u>0.05%-0.07%</u>	<u>0.08%-0.39%</u>	
All	928	586	58	23	261	28.1
1994	82	46	3	2	31	37.8
1995	93	60	6	3	24	25.8
1996	138	107	2	2	27	19.6
1997	108	62	4	4	38	35.2
1998	101	59	12	2	28	27.7
1999	133	74	17	5	37	27.8
2000	112	70	3	2	37	33.0
2001	161	108	11	3	39	24.2
2002	163	110	4	3	46	30.1

Comment: From 1994 to 2002, 1,091 alcohol tests were performed to determine the Blood-Alcohol Content (BAC) of vehicle operators involved in fatal traffic crashes. Thirty-one percent of all vehicle operators involved in a motor vehicle crash fatality from 1994 to 2002 had a test result of 0.08 % or greater BAC, and would be considered driving under the influence of alcohol.

Methods: Fatal traffic crashes must involve a motor vehicle traveling on a traffic way customarily open to the public and result in the death of a person (occupant of a vehicle or a non-occupant) within 30 days of the crash. All persons involved in a motor vehicle crash where a fatality occurs are tested for Blood Alcohol Content (BAC) through a blood test. A blood alcohol content of 0.08% or higher is considered driving illegally under the influence of alcohol.

Healthy People 2010 26-1a: Reduce deaths caused by alcohol-related motor vehicle crashes to 4 deaths per 100,000 population.

Healthy New Hampshire 2010 Objective: Reduce the number of alcohol-related deaths on New Hampshire roads to 24 deaths per year.

Data Source: New Hampshire Department of Safety, Fatal Analysis Reporting System, 1994-2002

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APPENDIX A: BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM ALCOHOL CONSUMPTION QUESTIONS – 1990-2001

1990-1999 BRFSS Questions: Alcohol Consumption

9.1. During the past month, have you had at least one drink of any alcoholic beverage such as beer, wine, wine coolers, or liquor?

- a. Yes
- b. No **Go to Q10.1**
 - Don't know/Not sure **Go to Q10.1**
 - Refused **Go to Q10.1**

9.2. During the past month, how many days per week or per month did you drink any alcoholic beverages, on the average?

- a. Days per week
- b. Days per month
 - Don't know/Not sure **Go to Q9.4**
 - Refused **Go to Q9.4**

9.3. A drink is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. On the days when you drank, about how many drinks did you drink on the average?

- Number of drinks
- Don't know/Not sure
- Refused

9.4. Considering all types of alcoholic beverages, how many times during the past month did you have 5 or more drinks on an occasion?

- a. Number of times
- b. None
 - Don't know/Not sure
 - Refused

9.5. During the past month, how many times have you driven when you've had perhaps too much to drink?

- a. Number of times
- b. None
 - Don't know/Not sure
 - Refused

2001 BRFSS Questions: Alcohol Consumption

11.1. A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past 30 days, how often have you had at least one drink of any alcoholic beverage?

Days per week	
Days in past 30	
No drinks in past 30 days	Go to 12.1
Don't know/Not sure	Go to 12.1
Refused	Go to 12.1

11.2. On the days when you drank, about how many drinks did you drink on the average?

Number of drinks
Don't know/Not sure
Refused

11.3. Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?

Number of times
None
Don't know/Not sure
Refused

APPENDIX B: YOUTH RISK BEHAVIOR SURVEY ALCOHOL CONSUMPTION QUESTIONS – 1993-2001

10. During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?

1. 0 times
 2. 1 time
 3. 2 or 3 times
 4. 4 or 5 times
 5. 6 or more times
- Missing

11. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?

1. 0 times
 2. 1 time
 3. 2 or 3 times
 4. 4 or 5 times
 5. 6 or more times
- Missing

39. During your life, on how many days have you had at least one drink of alcohol?

1. 0 days
 2. 1 or 2 days
 3. 3 to 9 days
 4. 10 to 19 days
 5. 20 to 39 days
 6. 40 to 99 days
 7. 100 or more days
- Missing

40. How old were you when you had your first drink of alcohol other than a few sips?

1. I have never had a drink of alcohol other than a few sips
 2. 8 years old or younger
 3. 9 or 10 years old
 4. 11 or 12 years old
 5. 13 or 14 years old
 6. 15 or 16 years old
 7. 17 years old or older
- Missing

41. During the past 30 days, on how many days did you have at least one drink of alcohol?

1. 0 days
 2. 1 or 2 days
 3. 3 to 5 days
 4. 6 to 9 days
 5. 10 to 19 days
 6. 20 to 29 days
 7. All 30 days
- Missing

42. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

1. 0 days
 2. 1 day
 3. 2 days
 4. 3 to 5 days
 5. 6 to 9 days
 6. 10 to 19 days
 7. 20 or more days
- Missing

APPENDIX C: NEW HAMPSHIRE HIGHER EDUCATION ALCOHOL, TOBACCO AND OTHER DRUG SURVEY ALCOHOL CONSUMPTION QUESTIONS, 2001-2003

22. How many times in the last two weeks have you had 5 or more alcoholic drinks in one sitting?
23. How many drinks do you typically consume in a week?
- 26e. In the past 30 days, how many days did you use alcohol (beer, wine, liquor)?
- 28e. In the past 6 months, how many days did you use alcohol (beer, wine, liquor)?